

11/10/08

- Transforming Growth Factor $\beta 2$ on Marrow-Infused Foam Poly(Propylene Fumarate) Tissue-Engineered Constructs for the Repair of Critical-Size Cranial Defects in Rabbits," *Tissue Eng.*, 11, 923-939 (2005).
207. H. Park, J.S. Temenoff, T.A. Holland, Y. Tabata, and A.G. Mikos, "Delivery of TGF- $\beta 1$ and Chondrocytes via Injectable, Biodegradable Hydrogels for Cartilage Tissue Engineering Applications," *Biomaterials*, 26, 7095-7103 (2005).
 208. P.Q. Ruhé, E.L. Hedberg, N.T. Padron, P.H.M. Spauwen, J.A. Jansen, and A.G. Mikos, "Biocompatibility and Degradation of Poly(DL-Lactic-co-Glycolic Acid)/Calcium Phosphate Cement Composites," *J. Biomed. Mater. Res. Part A*, 74A, 533-544 (2005).
 209. P.Q. Ruhé, O.C. Boerman, F.G.M. Russel, P.H.M. Spauwen, A.G. Mikos, and J.A. Jansen, "Controlled Release of rhBMP-2 Loaded Poly(DL-Lactic-co-Glycolic Acid)/Calcium Phosphate Cement Composites *In Vivo*," *J. Controlled Release*, 106, 162-171 (2005).
 210. T.A. Holland, E.W.H. Bodde, L.S. Baggett, Y. Tabata, A.G. Mikos, and J.A. Jansen, "Osteochondral Repair in the Rabbit Model Utilizing Bilayered, Degradable Oligo(Poly(Ethylene Glycol) Fumarate) Hydrogel Scaffolds," *J. Biomed. Mater. Res. Part A*, 75A, 156-167 (2005).
 211. Z. Lalani, M. Wong, E.M. Brey, A.G. Mikos, P.J. Duke, M.J. Miller, C. Johnston, and D. Montufar-Solis, "Spatial and Temporal Localization of FGF-2 and VEGF in Healing Tooth Extraction Sockets in a Rabbit Model," *J. Oral Maxillofac. Surg.*, 63, 1500-1508 (2005).
 212. F.K. Kasper, T. Kushibiki, Y. Kimura, A.G. Mikos, and Y. Tabata, "In Vivo Release of Plasmid DNA from Composites of Oligo(Poly(Ethylene Glycol) Fumarate) and Cationized Gelatin Microspheres," *J. Controlled Release*, 107, 547-561 (2005).
 213. E.L. Hedberg, H.C. Kroese-Deutman, C.K. Shih, J.J. Lemoine, M.A.K. Liebschner, M.J. Miller, A.W. Yasko, R.S. Crowther, D.H. Carney, A.G. Mikos, and J.A. Jansen, "A Comparative Analysis of Radiography, Microcomputed Tomography, and Histology for Bone Tissue Engineering," *Tissue Eng.*, 11, 1356-1367 (2005).
 214. C.-Y. Lin, R.M. Schek, A.S. Mistry, X. Shi, A.G. Mikos, P.H. Krebsbach, and S.J. Hollister, "Functional Bone Engineering Using *Ex Vivo* Gene Therapy and Topology-Optimized, Biodegradable Polymer Composite Scaffolds," *Tissue Eng.*, 11, 1589-1598 (2005).
 215. S. Young, M. Wong, Y. Tabata, and A.G. Mikos, "Gelatin as a Delivery Vehicle for the Controlled Release of Bioactive Molecules," *J. Controlled Release*, 109, 256-274 (2005).
 216. N. Datta, Q.P. Pham, U. Sharma, V.I. Sikavitsas, J.A. Jansen, and A.G. Mikos, "In Vitro Generated Extracellular Matrix and Fluid Shear Stress Synergistically Enhance 3D Osteoblastic Differentiation," *Proceed. Natl. Acad. Sci. USA*, 103, 2488-2493 (2006).
 217. M.E. Gomes, C.M. Bossano, C.M. Johnston, R.L. Reis, and A.G. Mikos, "In Vitro Localization of Bone Growth Factors in Constructs of Biodegradable Scaffolds Seeded with Marrow Stromal Cells and Cultured in a Flow Perfusion Bioreactor," *Tissue Eng.*, 12, 177-188 (2006).
 218. P.Q. Ruhé, E.L. Hedberg-Dirk, N.T. Padron, P.H.M. Spauwen, J.A. Jansen, and A.G. Mikos, "Porous Poly(DL-Lactic-co-Glycolic Acid)/Calcium Phosphate Cement Composite for Reconstruction of Bone Defects," *Tissue Eng.*, 12, 789-800 (2006).
 219. M.E. Gomes, H.L. Holtorf, R.L. Reis, and A.G. Mikos, "Influence of the Porosity of Starch-Based Fiber Mesh Scaffolds on the Proliferation and Osteogenic Differentiation of Bone Marrow Stromal Cells Cultured in a Flow Perfusion Bioreactor," *Tissue Eng.*, 12, 801-809 (2006).

11/10/08

220. Q.P. Pham, U. Sharma, and A.G. Mikos, "Electrospinning of Polymeric Nanofibers for Tissue Engineering Applications: A Review," *Tissue Eng.*, *12*, 1197-1211 (2006).
221. F.K. Kasper, S. Young, K. Tanahashi, M.A. Barry, Y. Tabata, J.A. Jansen, and A.G. Mikos, "Evaluation of Bone Regeneration by DNA Release from Composites of Oligo(Poly(Ethylene Glycol) Fumarate) and Cationized Gelatin Microspheres in a Critical-Sized Calvarial Defect," *J. Biomed. Mater. Res. Part A*, *78A*, 335-342 (2006).
222. A. Saraf and A.G. Mikos, "Gene Delivery Strategies for Cartilage Tissue Engineering," *Adv. Drug Deliv. Rev.*, *58*, 592-603 (2006).
223. X. Shi, J.L. Hudson, P.P. Spicer, J.M. Tour, R. Krishnamoorti, and A.G. Mikos, "Injectable Nanocomposites of Single-Walled Carbon Nanotubes and Biodegradable Polymers for Bone Tissue Engineering," *Biomacromolecules*, *7*, 2237-2242 (2006).
224. F.K. Kasper, E. Jerkins, K. Tanahashi, M.A. Barry, Y. Tabata, and A.G. Mikos, "Characterization of DNA Release from Composites of Oligo(Poly(Ethylene Glycol) Fumarate) and Cationized Gelatin Microspheres *In Vitro*," *J. Biomed. Mater. Res. Part A*, *78A*, 823-835 (2006).
225. M.C. Hacker and A.G. Mikos, "Trends in Tissue Engineering Research," *Tissue Eng.*, *12*, 2049-2057 (2006).
226. W.J.E.M. Habraken, J.G.C. Wolke, A.G. Mikos, and J.A. Jansen, "Injectable PLGA Microsphere/Calcium Phosphate Cements: Physical Properties and Degradation Characteristics," *J. Biomater. Sci., Polym. Ed.*, *17*, 1057-1074 (2006).
227. A. Haesslein, H. Ueda, M. Hacker, S. Jo, D.M. Ammon, R.N. Borazjani, J.F. Kunzler, J.C. Salamone, and A.G. Mikos, "Long-Term Release of Fluocinolone Acetonide Using Biodegradable Fumarate-Based Polymers," *J. Controlled Release*, *114*, 251-260 (2006).
228. P.Q. Ruhé, O.C. Boerman, F.G.M. Russel, A.G. Mikos, P.H.M. Spauwen, and J.A. Jansen, "In Vivo Release of rhBMP-2 Loaded Porous Calcium Phosphate Cement Pretreated with Albumin," *J. Mater. Sci., Mater. Med.*, *17*, 919-927 (2006).
229. T.A. Holland and A.G. Mikos, "Biodegradable Polymeric Scaffolds, Improvements in Bone Tissue Engineering through Controlled Drug Delivery," *Adv. Biochem. Eng. Biotechnol.*, *102*, 161-185 (2006).
230. Q.P. Pham, U. Sharma, and A.G. Mikos, "Electrospun Poly(ϵ -Caprolactone) Microfiber and Multilayer Nanofiber/Microfiber Scaffolds: Characterization of Scaffolds and Measurement of Cellular Infiltration," *Biomacromolecules*, *7*, 2796-2805 (2006).
231. A.G. Mikos, S.W. Herring, P. Ochareon, J. Elisseeff, H.H. Lu, R. Kandel, F.J. Schoen, M. Toner, D. Mooney, A. Atala, M.E. van Dyke, D. Kaplan, and G. Vunjak-Novakovic, "Engineering Complex Tissues," *Tissue Eng.*, *12*, 3307-3339 (2006).
232. E.M. Christenson, K.S. Anseth, J.J.J.P. van den Beucken, C.K. Chan, B. Ercan, J.A. Jansen, C.T. Laurencin, W.-J. Li, R. Murugan, L.S. Nair, S. Ramakrishna, R.S. Tuan, T.J. Webster, and A.G. Mikos, "Nanobiomaterial Applications in Orthopaedics," *J. Orthop. Res.*, *25*, 11-22 (2007).
233. T.A. Holland, E.W.H. Bodde, V.M.J.I. Cuijpers, L.S. Baggett, Y. Tabata, A.G. Mikos, and J.A. Jansen, "Degradable Hydrogel Scaffolds for *In Vivo* Evaluation of Growth Factor Interactions in Cartilage Repair," *Osteoarthritis Cartilage*, *15*, 187-197 (2007).
234. H. Park, J.S. Temenoff, Y. Tabata, A.I. Caplan, and A.G. Mikos, "Injectable Biodegradable Hydrogel Composites for Rabbit Marrow Mesenchymal Stem Cell and Growth Factor Delivery for Cartilage Tissue Engineering," *Biomaterials*, *28*, 3217-3227 (2007).

11/10/08

235. J.D. Kretlow and A.G. Mikos, "Mineralization of Synthetic Polymer Scaffolds for Bone Tissue Engineering," *Tissue Eng.*, *13*, 927-938 (2007).
236. B. Sitharaman, X. Shi, L.A. Tran, P.P. Spicer, I. Rusakova, L.J. Wilson, and A.G. Mikos, "Injectable *In Situ* Crosslinkable Nanocomposites of Biodegradable Polymers and Carbon Nanostructures for Bone Tissue Engineering," *J. Biomater. Sci., Polym. Ed.*, *18*, 655-671 (2007).
237. M. Hacker, M. Ringhofer, B. Appel, M. Neubauer, T. Vogel, S. Young, A.G. Mikos, T. Blunk, A. Göpferich, and M.B. Schulz, "Solid Lipid Templating of Macroporous Tissue Engineering Scaffolds," *Biomaterials*, *28*, 3497-3507 (2007).
238. J.D. Kretlow, L. Klouda, and A.G. Mikos, "Injectable Matrices and Scaffolds for Drug Delivery in Tissue Engineering," *Adv. Drug Deliv. Rev.*, *59*, 263-273 (2007).
239. J.M. Ashcroft, K.B. Hartman, K.R. Kissell, Y. Mackeyev, S. Pheasant, S. Young, P.A.W. Van der Heide, A.G. Mikos, and L.J. Wilson, "Single-Molecule I₂@US-Tube Nanocapsules: A New X-Ray Contrast-Agent Design," *Adv. Mater.*, *19*, 573-576 (2007).
240. H. Castano-Izquierdo, J. Alvarez-Barreto, J. van den Dolder, J.A. Jansen, A.G. Mikos, and V.I. Sikavitsas, "Pre-Culture Period of Mesenchymal Stem Cells in Osteogenic Media Influences their *In Vivo* Bone Forming Potential," *J. Biomed. Mater. Res. Part A*, *82A*, 129-138 (2007).
241. B. Sitharaman, L.A. Tran, Q.P. Pham, R.D. Bolskar, R. Muthupillai, S.D. Flamm, A.G. Mikos, and L.J. Wilson, "Gadofullerenes as Nanoscale Magnetic Labels for Cellular MRI," *Contrast Media Mol. Imaging*, *2*, 139-146 (2007).
242. M.B. Murphy, J.D. Hartgerink, A. Göpferich, and A.G. Mikos, "Synthesis and *In Vitro* Hydroxyapatite Binding of Peptides Conjugated to Calcium-Binding Moieties," *Biomacromolecules*, *8*, 2237-2243 (2007).
243. X. Shi, B. Sitharaman, Q.P. Pham, F. Liang, K. Wu, W.E. Billups, L.J. Wilson, and A.G. Mikos, "Fabrication of Porous Ultra-Short Single-Walled Carbon Nanotube Nanocomposite Scaffolds for Bone Tissue Engineering," *Biomaterials*, *28*, 4078-4090 (2007).
244. S.C.G. Leeuwenburgh, J.A. Jansen, and A.G. Mikos, "Functionalization of Oligo(Poly(Ethylene Glycol) Fumarate) Hydrogels with Finely Dispersed Calcium Phosphate Nanocrystals for Bone-Substituting Purposes," *J. Biomater. Sci., Polym. Ed.*, *18*, 1547-1564 (2007).
245. H. Ueda, M.C. Hacker, A. Haesslein, S. Jo, D.M. Ammon, R.N. Borazjani, J.F. Kunzler, J.C. Salamone, and A.G. Mikos, "Injectable, *In Situ* Forming Poly(Propylene Fumarate)-Based Ocular Drug Delivery Systems," *J. Biomed. Mater. Res. Part A*, *83A*, 656-666 (2007).
246. S. Kaihara, S. Matsumura, A.G. Mikos, and J.P. Fisher, "Synthesis of Poly(L-Lactide) and Polyglycolide by Ring-Opening Polymerization," *Nature Protocols*, *2*, 2767-2771 (2007).
247. A.S. Mistry, A.G. Mikos, and J.A. Jansen, "Degradation and Biocompatibility of a Poly(Propylene Fumarate)-Based/Alumoxane Nanocomposite for Bone Tissue Engineering," *J. Biomed. Mater. Res. Part A*, *83A*, 940-953 (2007).
248. P.C. Johnson, A.G. Mikos, J.P. Fisher, and J.A. Jansen, "Strategic Directions in Tissue Engineering," *Tissue Eng.*, *13*, 2827-2837 (2007).
249. E.M. Christenson, W. Soofi, J.L. Holm, N.R. Cameron, and A.G. Mikos, "Biodegradable Fumarate-Based PolyHIPEs as Tissue Engineering Scaffolds," *Biomacromolecules*, *8*, 3806-3814 (2007).

11/10/08

250. A. Haesslein, M.C. Hacker, and A.G. Mikos, "Effect of Macromer Molecular Weight on *In Vitro* Ophthalmic Drug Release from Photo-Crosslinked Matrices," *Acta Biomaterialia*, 4, 1-10 (2008).
251. L. Klouda and A.G. Mikos, "Thermoresponsive Hydrogels in Biomedical Applications," *Eur. J. Pharm. Biopharm.*, 68, 34-45 (2008).
252. D.P. Link, J. van den Dolder, J.J.J.P. van den Beucken, J.G.C. Wolke, A.G. Mikos, and J.A. Jansen, "Bone Response and Mechanical Strength of Rabbit Femoral Defects Filled with Injectable CaP Cements Containing TGF- β 1 Loaded Gelatin Microparticles," *Biomaterials*, 29, 675-682 (2008).
253. E.W.H. Bodde, P.H.M. Spauwen, A.G. Mikos, and J.A. Jansen, "Closing Capacity of Segmental Radius Defects in Rabbits," *J. Biomed. Mater. Res. Part A*, 85A, 206-217 (2008).
254. Y. Khan, M.J. Yaszemski, A.G. Mikos, and C. Laurencin, "Tissue Engineering of Bone: Material and Matrix Considerations," *J. Bone Joint Surg.*, 90, 36-42 (2008).
255. A. Saraf, M.C. Hacker, B. Sitharaman, K.J. Grande-Allen, M.A. Barry, and A.G. Mikos, "Synthesis and Conformational Evaluation of a Novel Gene Delivery Vector for Human Mesenchymal Stem Cells," *Biomacromolecules*, 9, 818-827 (2008).
256. W.J.E.M. Habraken, Z. Zhang, J.G.C. Wolke, D.W. Grijpma, A.G. Mikos, J. Feijen, and J.A. Jansen, "Introduction of Enzymatically Degradable Poly(Trimethylene Carbonate) Microspheres into an Injectable Calcium Phosphate Cement," *Biomaterials*, 29, 2464-2476 (2008).
257. Q.P. Pham, F.K. Kasper, L.S. Baggett, R.M. Raphael, J.A. Jansen, and A.G. Mikos, "The Influence of an *In Vitro* Generated Bone-like Extracellular Matrix on Osteoblastic Gene Expression of Marrow Stromal Cells," *Biomaterials*, 29, 2729-2739 (2008).
258. S. Young, A.G. Bashoura, T. Borden, L.S. Baggett, J.A. Jansen, M. Wong, and A.G. Mikos, "Development and Characterization of a Rabbit Alveolar Bone Nonhealing Defect Model," *J. Biomed. Mater. Res. Part A*, 86A, 182-194 (2008).
259. M.C. Hacker, L. Klouda, B.B. Ma, J.D. Kretlow, and A.G. Mikos, "Synthesis and Characterization of Injectable, Thermally and Chemically Gelable, Amphiphilic Poly(N-Isopropylacrylamide)-Based Macromers," *Biomacromolecules*, 9, 1558-1570 (2008).
260. P.M. Mountziaris and A.G. Mikos, "Modulation of the Inflammatory Response for Enhanced Bone Tissue Regeneration," *Tissue Eng. Part B: Reviews*, 14, 179-186 (2008).
261. B. Sitharaman, X. Shi, X.F. Walboomers, H. Liao, V. Cuijpers, L.J. Wilson, A.G. Mikos, and J.A. Jansen, "*In Vivo* Biocompatibility of Ultra-Short Single-Walled Carbon Nanotube/Biodegradable Polymer Nanocomposites for Bone Tissue Engineering," *Bone*, 43, 362-370 (2008).
262. X. Shi, B. Sitharaman, Q.P. Pham, P.P. Spicer, J.L. Hudson, L.J. Wilson, J.M. Tour, R.M. Raphael, and A.G. Mikos, "*In Vitro* Cytotoxicity of Single-Walled Carbon Nanotube/Biodegradable Polymer Nanocomposites," *J. Biomed. Mater. Res. Part A*, 86A, 813-823 (2008).
263. Z.S. Patel, M. Yamamoto, H. Ueda, Y. Tabata, and A.G. Mikos, "Biodegradable Gelatin Microparticles as Delivery Systems for the Controlled Release of Bone Morphogenetic Protein-2," *Acta Biomaterialia*, 4, 1126-1138 (2008).
264. W.J.E.M. Habraken, J.G.C. Wolke, A.G. Mikos, and J.A. Jansen, "PLGA Microsphere/Calcium Phosphate Cement Composites for Tissue Engineering: *In Vitro* Release and Degradation Characteristics," *J. Biomater. Sci., Polym. Ed.*, 19, 1171-1188

11/10/08

- (2008).
265. S. Young, J.D. Kretlow, C. Nguyen, A.G. Bashoura, L.S. Baggett, J.A. Jansen, M. Wong, and A.G. Mikos, "Microcomputed Tomography Characterization of Neovascularization in Bone Tissue Engineering Applications," *Tissue Eng. Part B: Reviews*, 14, 295-306 (2008).
 266. Z.S. Patel, H. Ueda, M. Yamamoto, Y. Tabata, and A.G. Mikos, "In Vitro and In Vivo Release of Vascular Endothelial Growth Factor from Gelatin Microparticles and Biodegradable Composite Scaffolds," *Pharm. Res.*, 25, 2370-2378 (2008).
 267. Z.S. Patel, S. Young, Y. Tabata, J.A. Jansen, M.E.K. Wong, and A.G. Mikos, "Dual Delivery of an Angiogenic and an Osteogenic Growth Factor for Bone Regeneration in a Critical Size Defect Model," *Bone*, 43, 931-940 (2008).
 268. W.J.E.M. Habraken, L.T. de Jonge, J.G.C. Wolke, L. Yubao, A.G. Mikos, and J.A. Jansen, "Introduction of Gelatin Microspheres into an Injectable Calcium Phosphate Cement," *J. Biomed. Mater. Res. Part A*, 87A, 643-655 (2008).
 269. D.P. Link, J. van den Dolder, J.J.J.P. van den Beucken, V.M. Cuijpers, J.G.C. Wolke, A.G. Mikos, and J.A. Jansen, "Evaluation of the Biocompatibility of Calcium Phosphate Cement/PLGA Microparticle Composites," *J. Biomed. Mater. Res. Part A*, 87A, 760-769 (2008).
 270. E.W.H. Bodde, O.C. Boerman, F.G.M. Russel, A.G. Mikos, P.H.M. Spauwen, and J.A. Jansen, "The Kinetic and Biological Activity of Different Loaded rhBMP-2 Calcium Phosphate Cement Implants in Rats," *J. Biomed. Mater. Res. Part A*, 87A, 780-791 (2008).
 271. B. Sitharaman, T.Y. Zakharian, A. Saraf, P. Misra, J. Ashcroft, S. Pan, Q.P. Pham, A.G. Mikos, L.J. Wilson, and D.A. Engler, "Water-Soluble Fullerene (C60) Derivatives as Nonviral Gene-Delivery Vectors," *Mol. Pharmacol.*, 5, 567-578 (2008).
 272. J.D. Kretlow, Y.-Q. Jin, W. Liu, W.J. Zhang, T.-H. Hong, G. Zhou, L.S. Baggett, A.G. Mikos, and Y. Cao, "Donor Age and Cell Passage Affect Differentiation Potential of Murine Bone Marrow-Derived Stem Cells," *BMC Cell Biology*, 9, 60 (2008).
 273. Q.P. Pham, F.K. Kasper, A.S. Mistry, U. Sharma, A.W. Yasko, J.A. Jansen, and A.G. Mikos, "Analysis of the Osteoinductive Capacity and Angiogenicity of an In Vitro Generated Extracellular Matrix," *J. Biomed. Mater. Res. Part A*, in press.
 274. H. Park, J.S. Temenoff, Y. Tabata, A.I. Caplan, R.M. Raphael, J.A. Jansen, and A.G. Mikos, "Effect of Dual Growth Factor Delivery on Chondrogenic Differentiation of Rabbit Marrow Mesenchymal Stem Cells Encapsulated in Injectable Hydrogel Composites," *J. Biomed. Mater. Res. Part A*, in press.
 275. A.S. Mistry, S.H. Cheng, T. Yeh, E.M. Christenson, J.A. Jansen, and A.G. Mikos, "Fabrication and In Vitro Degradation of Porous Fumarate-Based Polymer/Alumoxane Nanocomposite Scaffolds for Bone Tissue Engineering," *J. Biomed. Mater. Res. Part A*, in press.
 276. M.C. Hacker, A. Haesslein, H. Ueda, W.J. Foster, C.A. Garcia, D.M. Ammon, R.N. Borazjani, J.F. Kunzler, J.C. Salamone, and A.G. Mikos, "Biodegradable Fumarate-Based Drug Delivery Systems for Ophthalmic Applications," *J. Biomed. Mater. Res. Part A*, in press.
 277. A. Haesslein, M.C. Hacker, H. Ueda, D.M. Ammon, R.N. Borazjani, J.F. Kunzler, J.C. Salamone, and A.G. Mikos, "Matrix Modifications Modulate Ophthalmic Drug Delivery from Photo-Crosslinked Poly(Propylene Fumarate)-Based Networks," *J. Biomater. Sci., Polym. Ed.*, in press.

11/10/08

278. A.M. Martins, Q.P. Pham, P.B. Malafaya, R.A. Sousa, M.E. Gomes, R.M. Raphael, F.K. Kasper, R.L. Reis, and A.G. Mikos, "The Role of Lipase and α -Amylase in both the Degradation of Starch/Poly(ϵ -caprolactone) Fiber Meshes and the Osteogenic Differentiation of Cultured Marrow Stromal Cells," *Tissue Eng. Part A*, in press.
279. A.M. Martins, Q.P. Pham, P.B. Malafaya, R.M. Raphael, F.K. Kasper, R.L. Reis, and A.G. Mikos, "Natural Stimulus Responsive Scaffolds/Cells for Bone Tissue Engineering: Influence of Lysozyme upon Scaffold Degradation and Osteogenic Differentiation of Cultured Marrow Stromal Cells Induced by CaP Coatings," *Tissue Eng. Part A*, in press.
280. D.P. Link, J. van den Dolder, J.J.P. van den Beucken, W.J.E.M. Habraken, A. Soede, O.C. Boerman, A.G. Mikos, and J.A. Jansen, "Evaluation of an Orthotopically Implanted Calcium Phosphate Cement Containing Gelatin Microparticles," *J. Biomed. Mater. Res. Part A*, in press.
281. J.D. Kretlow and A.G. Mikos, "2007 AICHE Alpha Chi Sigma Award: From Material to Tissue: Biomaterial Development, Scaffold Fabrication, and Tissue Engineering," *AIChE J.*, in press.
282. P.M. Mountziaris, P.R. Kramer, and A.G. Mikos, "Emerging Intra-Articular Drug Delivery Systems for the Temporomandibular Joint," *Methods*, in press.
283. A.S. Mistry, Q.P. Pham, C. Shouten, T. Yeh, E.M. Christenson, A.G. Mikos, and J.A. Jansen, "In Vivo Bone Biocompatibility and Degradation of Porous Fumarate-Based Polymer/Alumoxane Nanocomposites for Bone Tissue Engineering," *J. Biomed. Mater. Res. Part A*, in press.
284. W.J.E.M. Habraken, O.C. Boerman, J.G.C. Wolke, A.G. Mikos, and J.A. Jansen, "In Vitro Growth Factor Release from Injectable Calcium Phosphate Cements Containing Gelatin Microspheres," *J. Biomed. Mater. Res. Part A*, in press.
285. H. Park, X. Guo, J.S. Temenoff, Y. Tabata, A.I. Caplan, F.K. Kasper, and A.G. Mikos, "Effect of Swelling Ratio of Injectable Hydrogel Composites on Chondrogenic Differentiation of Encapsulated Rabbit Marrow Mesenchymal Stem Cells *In Vitro*," *Biomacromolecules*, submitted.
286. W.J.E.M. Habraken, J.G.C. Wolke, A.G. Mikos, and J.A. Jansen, "Porcine Gelatin Microsphere/Calcium Phosphate Composites: *In Vitro* Degradation and Drug Release," *J. Biomed. Mater. Res. Part B: Applied Biomaterials*, submitted.
287. B. Sitharaman, M. van der Zande, J.S. Ananta, X. Shi, A. Veltien, X.F. Walboomers, L.J. Wilson, A.G. Mikos, A. Heerschap, and J.A. Jansen, "Magnetic Resonance Imaging Studies on Gadonanotube Reinforced Biodegradable Polymer Nanocomposites," *Biomaterials*, submitted.
288. F.K. Kasper, K. Tanahashi, J.P. Fisher, and A.G. Mikos, "Synthesis of Poly(Propylene Fumarate)," *Nature Protocols*, submitted.
289. S. Young, Z.S. Patel, J.D. Kretlow, M.B. Murphy, P.M. Mountziaris, L.S. Baggett, H. Ueda, Y. Tabata, J.A. Jansen, M. Wong, and A.G. Mikos, "Dose Effect of Dual Delivery of Vascular Endothelial Growth Factor and Bone Morphogenetic Protein-2 on Bone Regeneration in a Rat Critical Size Defect Model," *Tissue Eng. Part A*, submitted.
290. X. Guo, H. Park, S. Young, J.D. Kretlow, J.J. van den Beucken, L.S. Baggett, Y. Tabata, F.K. Kasper, A.G. Mikos, and J.A. Jansen, "Repair of Osteochondral Defects with Biodegradable Hydrogel Composites Encapsulating Marrow Mesenchymal Stem Cells in a Rabbit Model," *J. Orthop. Res.*, submitted.

11/10/08

291. L. Klouda and A.G. Mikos, "Biomaterials, Drug Delivery and Bionanotechnology - The Research that Paved the Way: Professor Nicholas Peppas' Research Over the Years," *Pharm. Res.*, submitted.
292. C. Nguyen, S. Young, J.D. Kretlow, A.G. Mikos, and M. Wong, "Surface Characteristics of Biomaterials Used for Space Maintenance in a Mandibular Defect: A Pilot Animal Study," *J. Oral Maxillofac. Surg.*, submitted.
293. K. Kim, D. Dean, A.G. Mikos, and J.P. Fisher, "The Effect of Initial Cell Seeding Density on Early Osteogenic Signal Expression of Bone Marrow Stromal Cells Cultured on Crosslinked Poly(Propylene Fumarate) Disks," *Biomaterials*, submitted.
294. X. Guo, H. Park, G. Liu, W. Liu, Y. Cao, Y. Tabata, F.K. Kasper, and A.G. Mikos, "In Vitro Generation of an Osteochondral Construct Using Injectable Hydrogel Composites Encapsulating Rabbit Marrow Mesenchymal Stem Cells," *Biomaterials*, submitted.

Educational Publications

1. S.L. Ishaug and A.G. Mikos, "A Course on Tissue Engineering," *Chem. Eng. Educ.*, 29, 126-129 (1995).
2. L.V. McIntire and A.G. Mikos, "Biomedical Chemical Engineering," in *McGraw-Hill Encyclopedia of Science & Technology*, 8th Ed., Vol. 2, McGraw-Hill, New York, 1997, pp. 702-705.

Chapters in Books and Encyclopedias

1. N.A. Peppas and A.G. Mikos, "Preparation Methods and Structure of Hydrogels," in *Hydrogels in Medicine and Pharmacy. Volume I: Fundamentals*, N.A. Peppas, Ed., CRC Press, Boca Raton, 1986, pp. 1-25.
2. A.G. Mikos and N.A. Peppas, "Fracture Mechanics of Low Molecular Weight Polymers," in *Adhesion in Solids*, D.M. Mattox, J.E.E. Baglin, R.J. Gottschall, and C.D. Batich, Eds., MRS Symposium Proceedings, Vol. 119, Materials Research Society, Pittsburgh, 1988, pp. 63-68.
3. A.G. Mikos and N.A. Peppas, "Scaling Concepts and Molecular Theories of Adhesion of Synthetic Polymers to Glycoproteic Networks," in *Bioadhesive Drug Delivery Systems*, V. Lenaerts and R. Gurny, Eds., CRC Press, Boca Raton, 1990, pp. 25-42.
4. N.A. Peppas and A.G. Mikos, "Kinetics of Mucus-Polymer Interactions," in *Bioadhesion-Possibilities and Future Trends*, R. Gurny and H.E. Junginger, Eds., Wissenschaftliche Verlagsgesellschaft, Stuttgart, 1990, pp. 65-85.
5. A.G. Mikos and N.A. Peppas, "Fracture Energy and Critical Strength of High Molecular Weight Glassy Polymers," in *Optical and Electrical Properties of Polymers*, J.A. Emerson and J.M. Torkelson, Eds., MRS Symposium Proceedings, Vol. 214, Materials Research Society, Pittsburgh, 1991, pp. 189-193.
6. A.G. Mikos, "Surfaces and Interfaces of Polymeric Biomaterials," in *Biocompatible Materials Engineering*, E. Wintermantel, Ed., Swiss Federal Institute of Technology Press, Zürich, Switzerland, 1991, pp. 9-62.
7. A.G. Mikos and C. Kiparissides, "Asymmetric Membrane Formation in the Heterogeneous Polymerization of Methyl Methacrylate," in *Kinetics of Phase Transformations*, M.O.

11/10/08

- Thompson, M.J. Aziz, and G.B. Stephenson, Eds., MRS Symposium Proceedings, Vol. 205, Materials Research Society, Pittsburgh, 1992, pp. 441-446.
8. A.G. Mikos, H.L. Wald, G. Sarakinos, S.M. Leite, and R. Langer, "Biodegradable Cell Transplantation Devices for Tissue Regeneration," in *Tissue-Inducing Biomaterials*, L.G. Cima and E.S. Ron, Eds., MRS Symposium Proceedings, Vol. 252, Materials Research Society, Pittsburgh, 1992, pp. 353-358.
 9. A.G. Mikos, "Biodegradable Polymers for Tissue Regeneration," in *Profiles on Biotechnology*, T.G. Villa and J. Abalde, Eds., University of Santiago Press, Santiago de Compostela, Spain, 1992, pp. 547-554.
 10. R.C. Thomson, M.J. Yaszemski, J.M. Powers, and A.G. Mikos, "A Novel Biodegradable Poly(Lactic-co-Glycolic Acid) Foam for Bone Regeneration," in *Biomaterials for Drug and Cell Delivery*, A.G. Mikos, R. Murphy, H. Bernstein, and N.A. Peppas, Eds., MRS Symposium Proceedings, Vol. 331, Materials Research Society, Pittsburgh, 1994, pp. 33-40.
 11. S.L. Ishaug, M.J. Yaszemski, R. Bizios, and A.G. Mikos, "Osteoblast Adhesion on Biodegradable Polymer Substrates," in *Biomaterials for Drug and Cell Delivery*, A.G. Mikos, R. Murphy, H. Bernstein, and N.A. Peppas, Eds., MRS Symposium Proceedings, Vol. 331, Materials Research Society, Pittsburgh, 1994, pp. 121-126.
 12. M.J. Yaszemski, A.G. Mikos, R.G. Payne, and W.C. Hayes, "Biodegradable Polymer Composites for Temporary Replacement of Trabecular Bone: The Effect of Polymer Molecular Weight on Composite Strength and Modulus," in *Biomaterials for Drug and Cell Delivery*, A.G. Mikos, R. Murphy, H. Bernstein, and N.A. Peppas, Eds., MRS Symposium Proceedings, Vol. 331, Materials Research Society, Pittsburgh, 1994, pp. 251-256.
 13. S.L. Ishaug, R.C. Thomson, A.G. Mikos, and R. Langer, "Biomaterials for Organ Regeneration," in *Molecular Biology and Biotechnology*, R.A. Meyers, Ed., VCH Publishers, New York, 1995, pp. 86-93.
 14. R.C. Thomson, S.L. Ishaug, A.G. Mikos, and R. Langer, "Polymers for Biological Systems," in *Molecular Biology and Biotechnology*, R.A. Meyers, Ed., VCH Publishers, New York, 1995, pp. 717-724.
 15. M.J. Yaszemski, R.G. Payne, T.B. Aufdemorte, W.C. Hayes, R. Langer, and A.G. Mikos, "The *In Vitro* Mechanical Strength and *In Vivo* Bone Ingrowth of a Degrading Polymeric Composite Biomaterial," in *Polymers in Medicine and Pharmacy*, A.G. Mikos, K.W. Leong, M.J. Yaszemski, J.A. Tamada, and M.L. Radomsky, Eds., MRS Symposium Proceedings, Vol. 394, Materials Research Society, Pittsburgh, 1995, pp. 21-24.
 16. R.C. Thomson, M.J. Yaszemski, J.M. Powers, T.P. Harrigan, and A.G. Mikos, "Poly(α -Hydroxy Ester)/Short Fiber Hydroxyapatite Composite Foams for Orthopedic Application," in *Polymers in Medicine and Pharmacy*, A.G. Mikos, K.W. Leong, M.J. Yaszemski, J.A. Tamada, and M.L. Radomsky, Eds., MRS Symposium Proceedings, Vol. 394, Materials Research Society, Pittsburgh, 1995, pp. 25-30.
 17. L.J. Suggs, R.G. Payne, E.Y. Kao, L.B. Alemany, M.J. Yaszemski, K.K. Wu, and A.G. Mikos, "The Synthesis and Characterization of a Novel Block Copolymer Consisting of Poly(Propylene Fumarate) and Poly(Ethylene Oxide)," in *Polymers in Medicine and Pharmacy*, A.G. Mikos, K.W. Leong, M.J. Yaszemski, J.A. Tamada, and M.L. Radomsky, Eds., MRS Symposium Proceedings, Vol. 394, Materials Research Society, Pittsburgh, 1995, pp. 167-173.

11/10/08

18. L.J. Suggs and A.G. Mikos, "Synthetic Biodegradable Polymers for Medical Applications," in *Physical Properties of Polymers Handbook*, J.E. Mark, Ed., American Institute of Physics, Woodbury, 1996, pp. 615-624.
19. R.C. Thomson, S.L. Ishaug, A.G. Mikos, and R. Langer, "Polymers for Biological Systems," in *Encyclopedia of Molecular Biology: Fundamentals and Applications*, R.A. Meyers, Ed., VCH Publishers, New York, 1996, pp. 31-44.
20. R.C. Thomson, M.J. Yaszemski, and A.G. Mikos, "Polymer Scaffold Processing," in *Principles of Tissue Engineering*, R.P. Lanza, R. Langer, and W.L. Chick, Eds., R.G. Landes, Austin, 1997, pp. 263-272.
21. R.D. Bostrom and A.G. Mikos, "Tissue Engineering of Bone," in *Synthetic Biodegradable Polymer Scaffolds*, A. Atala and D. Mooney, Eds., Birkhäuser, Boston, 1997, pp. 215-234.
22. M.T. am Ende and A.G. Mikos, "Diffusion Controlled Delivery of Proteins from Hydrogels and Other Hydrophilic Systems," in *Protein Delivery: Physical Systems*, L.M. Sanders and R.W. Hendren, Eds., Plenum, New York, 1997, pp. 139-165.
23. S.J. Peter, M.J. Miller, A.W. Yasko, M.J. Yaszemski, and A.G. Mikos, "Polymer Concepts Regarding Tissue Engineering," in *Portland Bone Symposium*, Oregon Health Sciences University, Portland, 1997, pp. 474-489.
24. R.G. Payne, S.A. Sivaram, J.E. Babensee, M.J. Yaszemski, A.W. Yasko, and A.G. Mikos, "Marrow Stromal Osteoblast Encapsulation and Seeding onto a Crosslinking Biodegradable Polymer," in *Biomaterials, Carriers for Drug Delivery, and Scaffolds for Tissue Engineering*, N.A. Peppas, D.J. Mooney, A.G. Mikos, and L. Brannon-Peppas, Eds., American Institute of Chemical Engineers, New York, 1997, pp. 87-89.
25. E. Yuksel, R. Cleek, A.B. Weinfeld, J. Waugh, J. Jensen, A.G. Mikos, S. Shenaq, and M. Spira, "Effects of Lipogenic Factors on Survival Rates of Fat Grafts," in *Biomaterials, Carriers for Drug Delivery, and Scaffolds for Tissue Engineering*, N.A. Peppas, D.J. Mooney, A.G. Mikos, and L. Brannon-Peppas, Eds., American Institute of Chemical Engineers, New York, 1997, pp. 173-175.
26. R.C. Thomson, M.J. Yaszemski, J.M. Powers, and A.G. Mikos, "Hydroxyapatite Fiber Reinforced Poly(a-Hydroxy Ester) Foams for Bone Regeneration," in *Biomaterials, Carriers for Drug Delivery, and Scaffolds for Tissue Engineering*, N.A. Peppas, D.J. Mooney, A.G. Mikos, and L. Brannon-Peppas, Eds., American Institute of Chemical Engineers, New York, 1997, pp. 269-271.
27. D.J. Kim, S.J. Peter, A.W. Yasko, M.J. Miller, M.J. Yaszemski, and A.G. Mikos, "TGF- β Induced Osteoblastic Behavior on a Poly(Propylene Fumarate) Based Orthopaedic Biomaterial," in *Biomaterials, Carriers for Drug Delivery, and Scaffolds for Tissue Engineering*, N.A. Peppas, D.J. Mooney, A.G. Mikos, and L. Brannon-Peppas, Eds., American Institute of Chemical Engineers, New York, 1997, pp. 278-280.
28. E. Yuksel, M. Widmer, A.B. Weinfeld, M. Kattash, J. Waugh, J. Jensen, A.G. Mikos, and S. Shenaq, "Generation of Shaped Cartilage Using Perichondrial and Periosteal Flaps Activated by Growth Factor-Incorporated Biodegradable Scaffolds," in *Biomaterials, Carriers for Drug Delivery, and Scaffolds for Tissue Engineering*, N.A. Peppas, D.J. Mooney, A.G. Mikos, and L. Brannon-Peppas, Eds., American Institute of Chemical Engineers, New York, 1997, pp. 287-289.
29. E. Yuksel, B. Ray, M. Widmer, A.B. Weinfeld, J. Waugh, J. Jensen, R. Cleek, A.G. Mikos, S. Shenaq, and M. Spira, "Prefabrication of Breast Utilizing Biodegradable PLGA Polymers: Angiogenic and Lipogenic Factors," in *Biomaterials, Carriers for Drug*

11/10/08

- Delivery, and Scaffolds for Tissue Engineering*, N.A. Peppas, D.J. Mooney, A.G. Mikos, and L. Brannon-Peppas, Eds., American Institute of Chemical Engineers, New York, 1997, pp. 341-343.
30. S.J. Peter, M.J. Miller, M.J. Yaszemski, and A.G. Mikos, "Poly(Propylene Fumarate)," in *Handbook of Biodegradable Polymers*, A.J. Domb, J. Kost, and D.M. Wiseman, Eds., Hardwood Academic Publishers, Amsterdam, The Netherlands, 1997, pp. 87-97.
 31. C.W. Patrick, Jr., A.G. Mikos, and L.V. McIntire, "Prospectus of Tissue Engineering," in *Frontiers in Tissue Engineering*, C.W. Patrick, Jr., A.G. Mikos, and L.V. McIntire, Eds., Elsevier Science, New York, 1998, pp. 3-11.
 32. M.S. Widmer and A.G. Mikos, "Fabrication of Biodegradable Polymer Scaffolds for Tissue Engineering," in *Frontiers in Tissue Engineering*, C.W. Patrick, Jr., A.G. Mikos, and L.V. McIntire, Eds., Elsevier Science, New York, 1998, pp. 107-120.
 33. G.R.D. Evans, K. Brandt, M.S. Widmer, A. Gürlek, T. Savel, P.K. Gupta, R. Lohman, J. Williams, J. Hodges, A. Nabawi, C.W. Patrick, Jr., and A.G. Mikos, "Tissue Engineered Nerve Conduits: The Use of Biodegradable Poly-DL-lactic-co-glycolic Acid (PLGA) Scaffolds in Peripheral Nerve Regeneration," in *Biological Matrices and Tissue Reconstruction*, G.B. Stark, R. Horch, and E. Tánčzos, Eds., Springer, Berlin, 1998, pp. 225-235.
 34. S.J. Peter, P. Kim, A.W. Yasko, M.J. Yaszemski, and A.G. Mikos, "Crosslinking Characteristics of an Injectable Poly(Propylene Fumarate)/ β -Tricalcium Phosphate Paste and Mechanical Properties of the Crosslinked Composite for Use as a Biodegradable Bone Cement," in *Biomaterials Regulating Cell Function and Tissue Development*, R.C. Thomson, D.J. Mooney, K.E. Healy, Y. Ikada, and A.G. Mikos, Eds., MRS Symposium Proceedings, Vol. 530, Materials Research Society, Pittsburgh, 1998, pp. 87-92.
 35. L.J. Suggs, E.Y. Kao, L.L. Palombo, R.S. Krishnan, M.S. Widmer, and A.G. Mikos, "Preparation and Characterization of Poly(Propylene Fumarate-co-Ethylene Glycol) Hydrogels," in *Polymers for Tissue Engineering*, M.S. Shoichet and J.A. Hubbell, Eds., VSP, Utrecht, 1998, pp. 99-112.
 36. A.C. Jen, S.J. Peter, and A.G. Mikos, "Preparation and Use of Porous Poly(α -Hydroxyester) Scaffolds for Bone Tissue Engineering," in *Tissue Engineering Methods and Protocols*, J.R. Morgan and M.L. Yarmush, Eds., Humana Press, Totowa, 1999, pp. 133-140.
 37. H.A. von Recum, M.J. Yaszemski, and A.G. Mikos, "Tissue Engineering Concepts," in *Handbook of Biomaterials Evaluation*, 2nd ed., A.F. von Recum, Ed., Taylor & Francis, Philadelphia, 1999, pp. 385-409.
 38. L. Lu and A.G. Mikos, "Poly(glycolic acid)," in *Polymer Data Handbook*, J.E. Mark, Ed., Oxford University Press, New York, 1999, pp. 566-569.
 39. L. Lu and A.G. Mikos, "Poly(lactic acid)," in *Polymer Data Handbook*, J.E. Mark, Ed., Oxford University Press, New York, 1999, pp. 627-633.
 40. R.C. Thomson, A.K. Shung, M.J. Yaszemski, and A.G. Mikos, "Polymer Scaffold Processing," in *Principles of Tissue Engineering*, 2nd Ed., R.P. Lanza, R. Langer, and J.P. Vacanti, Eds., Academic Press, San Diego, 2000, pp. 251-262.
 41. L. Lu, S.J. Peter, G.N. Stamatias, and A.G. Mikos, "Polymeric Delivery Vehicles for Bone Growth Factors," in *Controlled Drug Delivery: Designing Technologies for the Future*, K. Park and R.J. Mersny, Eds., American Chemical Society, Washington, D.C., 2000, pp. 124-138.

11/10/08

42. W.T. Godbey and A.G. Mikos, "Non-Viral Gene Delivery," in *Biomaterials and Drug Delivery toward New Millennium*, K.D. Park, I.C. Kwon, N. Yui, S.Y. Jeong, and K. Park, Eds., Han Rim Won Publishing, Seoul, Korea, 2000, pp. 223-236.
43. J.S. Temenoff, L. Lu, and A.G. Mikos, "Bone Tissue Engineering Using Synthetic Biodegradable Polymer Scaffolds," in *Bone Engineering*, J.E. Davies, Ed., EM Squared, Toronto, 2000, pp. 454-461.
44. G.N. Bancroft and A.G. Mikos, "Bone Tissue Engineering by Cell Transplantation," in *Tissue Engineering for Therapeutic Use 5*, Y. Ikada and N. Ohshima, Eds., Elsevier Science, New York, 2001, pp. 151-163.
45. E.L. Hedberg and A.G. Mikos, "Bone Augmentation and Repair," in *Encyclopedia of Materials: Science and Technology*, D.F. Williams, Ed., Elsevier Science, New York, 2001, 782-787.
46. V.I. Sikavitsas, G.N. Bancroft, and A.G. Mikos, "Formation of Three Dimensional Marrow Stromal Cell-Polymer Constructs in Bioreactors for Bone Tissue Engineering," in *Biomaterials for Drug Delivery and Tissue Engineering*, S. Mallapragada, M. Tracy, B. Narasimhan, E. Mathiowitz, and R. Korsmeyer, Eds., MRS Symposium Proceedings, Vol. 662, Materials Research Society, Warrendale, 2001, pp. LL1.2.1-LL1.2.6.
47. R.G. Payne, A.W. Yasko, M.J. Yaszemski, and A.G. Mikos, "Temporary Encapsulation of Rat Marrow Osteoblasts in Gelatin Microspheres for Bone Tissue Engineering," in *Biomaterials for Drug Delivery and Tissue Engineering*, S. Mallapragada, M. Tracy, B. Narasimhan, E. Mathiowitz, and R. Korsmeyer, Eds., MRS Symposium Proceedings, Vol. 662, Materials Research Society, Warrendale, 2001, pp. LL1.7.1-LL1.7.5.
48. J.P. Fisher, T.A. Holland, D. Dean, and A.G. Mikos, "Photocrosslinked Poly(Propylene Fumarate) Scaffolds for Orthopedic Applications," in *Biomaterials for Drug Delivery and Tissue Engineering*, S. Mallapragada, M. Tracy, B. Narasimhan, E. Mathiowitz, and R. Korsmeyer, Eds., MRS Symposium Proceedings, Vol. 662, Materials Research Society, Warrendale, 2001, pp. LL5.5.1-LL5.5.6.
49. E. Behravesch and A.G. Mikos, "Fabrication of an Injectable Porous Synthetic Biodegradable Hydrogel for Dental Tissue Engineering," in *Biomaterials for Drug Delivery and Tissue Engineering*, S. Mallapragada, M. Tracy, B. Narasimhan, E. Mathiowitz, and R. Korsmeyer, Eds., MRS Symposium Proceedings, Vol. 662, Materials Research Society, Warrendale, 2001, pp. LL5.6.1-LL5.6.6.
50. H. Shin, S. Jo, and A.G. Mikos, "Synthetic Biodegradable Polymer Networks Modulating Marrow Stromal Osteoblast Adhesion," in *Biomaterials for Drug Delivery and Tissue Engineering*, S. Mallapragada, M. Tracy, B. Narasimhan, E. Mathiowitz, and R. Korsmeyer, Eds., MRS Symposium Proceedings, Vol. 662, Materials Research Society, Warrendale, 2001, pp. LL6.5.1-LL6.5.6.
51. A.K. Shung and A.G. Mikos, "Effects of Block Lengths and Initial Water Content on the Swelling and Degradative Characteristics of an Injectable Poly(Propylene Fumarate-co-Ethylene Glycol) Block Copolymer Hydrogel," in *Biomaterials for Drug Delivery and Tissue Engineering*, S. Mallapragada, M. Tracy, B. Narasimhan, E. Mathiowitz, and R. Korsmeyer, Eds., MRS Symposium Proceedings, Vol. 662, Materials Research Society, Warrendale, 2001, pp. MM1.4.1-MM1.4.6.
52. E.L. Hedberg and A.G. Mikos, "Controlled Release of Bone Growth Factors from Injectable, Biodegradable Polymer Scaffolds for Bone Tissue Engineering," in *Biomaterials for Drug Delivery and Tissue Engineering*, S. Mallapragada, M. Tracy, B.

11/10/08

- Narasimhan, E. Mathiowitz, and R. Korsmeyer, Eds., MRS Symposium Proceedings, Vol. 662, Materials Research Society, Warrendale, 2001, pp. NN3.7.1-NN3.7.6.
53. R.G. Payne and A.G. Mikos, "Synthesis of Synthetic Polymers: Poly(Propylene Fumarate)," in *Methods of Tissue Engineering*, A. Atala and R. Lanza, Eds., Academic Press, San Diego, 2002, pp. 649-652.
54. H.L. Holtorf and A.G. Mikos, "Cationic and Non-Condensing Polymer-Based Gene Delivery," in *Pharmaceutical Perspectives of Nucleic Acid-Based Therapeutics*, R.I. Mahato and S.W. Kim, Eds., Taylor & Francis, New York, 2002, pp. 367-387.
55. G.N. Bancroft and A.G. Mikos, "Bone Tissue Engineering by Cell Transplantation," in *Polymer Based Systems on Tissue Engineering, Replacement and Regeneration*, R.L. Reis and D. Cohn, Eds., Kluwer Academic Publishers, Dordrecht, The Netherlands, 2002, pp. 251-263.
56. J.S. Temenoff and A.G. Mikos, "Injectable Biodegradable Materials for Orthopaedic Tissue Engineering," in *Polymer Based Systems on Tissue Engineering, Replacement and Regeneration*, R.L. Reis and D. Cohn, Eds., Kluwer Academic Publishers, Dordrecht, The Netherlands, 2002, pp. 299-312.
57. J.S. Temenoff, E.S. Steinbis, and A.G. Mikos, "Biodegradable Scaffolds," in *Orthopedic Tissue Engineering: Basic Science and Practice*, V.M. Goldberg and A.I. Caplan, Eds., Marcel Dekker, New York, 2004, pp. 77-103.
58. F.K. Kasper and A.G. Mikos, "Biomaterials and Gene Therapy," in *Molecular and Cellular Foundations of Biomaterials*, N.A. Peppas and M.V. Sefton, Eds., Advances in Chemical Engineering, Vol. 29, Elsevier, San Diego, 2004, pp. 131-168.
59. E. Jabbari, L. Lu, B.L. Currier, A.G. Mikos, and M.J. Yaszemski, "Injectable Polymers and Hydrogels for Orthopaedic and Dental Applications," in *Tissue Engineering in Musculoskeletal Clinical Practice*, L.J. Sandell and A.J. Grodzinsky, Eds., American Academy of Orthopaedic Surgeons, Rosemont, 2004, pp. 331-340.
60. A.G. Mikos, L. Lu, J.S. Temenoff, and J.K. Tessmar, "Synthetic Bioresorbable Polymer Scaffolds," in *Biomaterials Science: An Introduction to Materials in Medicine*, 2nd Ed., B.D. Ratner, A.S. Hoffman, F.J. Schoen, and J.E. Lemons, Eds., Elsevier, New York, 2004, pp. 735-749.
61. M.E. Gomes, R.L. Reis, and A.G. Mikos, "Injectable Polymeric Scaffolds for Bone Tissue Engineering," in *Biodegradable Systems in Tissue Engineering and Regenerative Medicine*, R.L. Reis and J.S. Roman, Eds., CRC Press, Boca Raton, 2005, pp. 29-38.
62. J.K.V. Tessmar, T.A. Holland, and A.G. Mikos, "Salt Leaching for Polymer Scaffolds: Laboratory-Scale Manufacture of Cell Carriers," in *Scaffolding in Tissue Engineering*, P.X. Ma and J. Elisseeff, Eds., Taylor & Francis, Boca Raton, 2006, pp. 111-124.
63. X. Shi and A.G. Mikos, "Poly(Propylene Fumarate)," in *An Introduction to Biomaterials*, S.A. Guelcher and J.O. Hollinger, Eds., CRC Press, Boca Raton, 2006, pp. 205-218.
64. A.G. Mikos, G. Sarakinos, S.M. Leite, J.P. Vacanti, and R. Langer, "Laminated Three-Dimensional Biodegradable Foams for Use in Tissue Engineering," in *The Biomaterials Silver Jubilee Compendium: The Best Papers Published in Biomaterials 1980-2004*, D.F. Williams, Ed., Elsevier, New York, 2006, pp. 93-100.
65. A.S. Mistry, X. Shi, and A.G. Mikos, "Nanocomposite Scaffolds for Tissue Engineering," in *Tissue Engineering and Artificial Organs*, The Biomedical Engineering Handbook, Vol. 3, 3rd Ed., J.D. Bronzino, Ed., CRC Press, Boca Raton, 2006, pp. 40-1-40-11.
66. H.L. Holtorf, J.A. Jansen, and A.G. Mikos, "Modulation of Cell Differentiation in Bone Tissue Engineering Constructs Cultured in a Bioreactor," in *Tissue Engineering*, J.P.

11/10/08

- Fisher, Ed., *Advances in Experimental Medicine and Biology*, Vol. 585, Springer, New York, 2006, pp. 225-241.
67. P.Q. Ruhé, O.C. Boerman, F.G.M. Russel, P.H.M. Spauwen, A.G. Mikos, and J.A. Jansen, "Controlled Release of rhBMP-2 Loaded Poly(DL-Lactic-co-Glycolic Acid)/Calcium Phosphate Cement Composites *In Vivo*," in *Bioceramics 18*, Key Engineering Materials, Vols. 309-311, Trans Tech Publications, Uetikon-Zurich, Switzerland, 2006, pp. 973-976.
 68. M.E. Gomes, R.L. Reis, and A.G. Mikos, "Bone Tissue Engineering Constructs Based on Starch Scaffolds and Bone Marrow Cells Cultured in a Flow Perfusion Bioreactor," in *Advanced Materials Forum III*, Materials Science Forum, Vols. 514-516, Trans Tech Publications, Uetikon-Zurich, Switzerland, 2006, pp. 980-984.
 69. L.J. Suggs, S.A. Moore, and A.G. Mikos, "Synthetic Biodegradable Polymers for Medical Applications," in *Physical Properties of Polymers Handbook*, 2nd Ed., J.E. Mark, Ed., Springer, New York, 2006, pp. 939-950.
 70. H. Park, J.S. Temenoff, and A.G. Mikos, "Biodegradable Orthopaedic Implants," in *Engineering of Functional Skeletal Tissues*, F. Bronner, M.C. Farach-Carson, and A.G. Mikos, Eds., Topics in Bone Biology, Vol. 3, Springer-Verlag, London, 2007, pp. 55-68.
 71. J.S. Temenoff, F.K. Kasper, and A.G. Mikos, "Fumarate-based Macromers as Scaffolds for Tissue Engineering Applications," in *Topics in Tissue Engineering*, N. Ashammakhi, R.L. Reis, and E. Chiellini, Eds., Expertissues E-book, Vol. 3, University of Oulu, Oulu, Finland, 2007, pp. 6.1-6.16.
 72. A.S. Mistry, X. Shi, and A.G. Mikos, "Nanocomposite Scaffolds for Tissue Engineering," in *Tissue Engineering*, J.P. Fisher, A.G. Mikos, and J.D. Bronzino, Eds., CRC Press, Boca Raton, 2007, pp. 11-1-11-11.
 73. M.B. Murphy and A.G. Mikos, "Polymer Scaffold Fabrication," in *Principles of Tissue Engineering*, 3rd Ed., R.P. Lanza, R. Langer, and J.P. Vacanti, Eds., Elsevier Academic Press, San Diego, 2007, pp. 309-321.
 74. U. Sharma, A.G. Mikos, and S.C. Cowin, "Mechanosensory Mechanisms in Bone," in *Principles of Tissue Engineering*, 3rd Ed., R.P. Lanza, R. Langer, and J.P. Vacanti, Eds., Elsevier Academic Press, San Diego, 2007, pp. 919-933.
 75. S. Young, K.A. Athanasiou, A.G. Mikos, and M.E.-K. Wong, "Oral and Maxillofacial Surgery," in *Principles of Tissue Engineering*, 3rd Ed., R.P. Lanza, R. Langer, and J.P. Vacanti, Eds., Elsevier Academic Press, San Diego, 2007, pp. 1079-1094.
 76. M.C. Hacker and A.G. Mikos, "Synthetic Polymers," in *Principles of Regenerative Medicine*, A. Atala, R.P. Lanza, J.A. Thomson, and R.M. Nerem, Eds., Elsevier Academic Press, San Diego, 2008, pp. 604-635.
 77. L. Klouda, J.D. Kretlow, and A.G. Mikos, "Tailored Biomaterials for Tissue Engineering Needs and their Clinical Translation," in *Translational Approaches in Tissue Engineering and Regenerative Medicine*, J.J. Mao, G. Vunjak-Novakovic, A.G. Mikos, and A. Atala, Eds., Artech House, Norwood, 2008, pp. 325-337.
 78. S. van Gaalen, M. Kruyt, G. Meijer, A.S. Mistry, A.G. Mikos, J. van den Beucken, J.A. Jansen, K. de Groot, R. Cancedda, C. Olivo, M.J. Yaszemski, and W. Dhert, "Tissue Engineering of Bone," in *Tissue Engineering*, C. van Blitterswijk, Ed., Elsevier Academic Press, San Diego, 2008, pp. 559-610.
 79. F.K. Kasper, J. Liao, J.D. Kretlow, V.I. Sikavitsas, and A.G. Mikos, "Flow Perfusion Culture of Mesenchymal Stem Cells for Bone Tissue Engineering," in *StemBook: Tissue Engineering*, S. Bhatia and J. Polak, Eds., Harvard Stem Cell Institute, Cambridge, 2008,

11/10/08

doi/10.3824/stembook.1.18.1, <http://www.stembook.org>.**Patents**

1. A.G. Mikos and R. Langer, "Preparation of Bonded Fiber Structures for Cell Implantation," U.S. Patent No. 5,512,600 (April 30, 1996).
2. A.G. Mikos, G. Sarakinos, J.P. Vacanti, R.S. Langer, and L.G. Cima, "Polymer Membranes and Methods of Preparation of Three Dimensional Membrane Structures," U.S. Patent No. 5,514,378 (May 7, 1996).
3. A.G. Mikos, "Bone Regeneration Templates," U.S. Patent No. 5,522,895 (June 4, 1996).
4. L.J. Suggs, R.G. Payne, M.J. Yaszemski, and A.G. Mikos, "Poly(Propylene Fumarate-co-Ethylene Oxide)," U.S. Patent No. 5,527,864 (June 18, 1996).
5. L.J. Suggs, R.G. Payne, M.J. Yaszemski, and A.G. Mikos, "Method of Making Poly(Propylene Fumarate-co-Ethylene Oxide)," U.S. Patent No. 5,644,005 (July 1, 1997).
6. A.G. Mikos and R. Langer, "Preparation of Bonded Fiber Structures for Cell Implantation," U.S. Patent No. 5,696,175 (December 9, 1997).
7. M.J. Yaszemski, R.G. Payne, and A.G. Mikos, "Poly(Propylene Fumarate)," U.S. Patent No. 5,733,951 (March 31, 1998).
8. S.J. Peter, M.J. Yaszemski, and A.G. Mikos, "Bone Replacement Compound Comprising Poly(Propylene Fumarate)," U.S. Patent No. 6,124,373 (September 26, 2000).
9. A.G. Mikos and S. Jo, "Functionalized Poly(Propylene Fumarate) and Poly(Propylene Fumarate-co-Ethylene Glycol)," U.S. Patent No. 6,306,821 (October 23, 2001).
10. S.J. Peter, L.J. Suggs, P.S. Engel, and A.G. Mikos, "Synthesis of Poly(Propylene Fumarate) by Acylation of Propylene Glycol in the Presence of a Proton Scavenger," U.S. Patent 6,355,755 (March 12, 2002).
11. S. He, M.J. Yaszemski, and A.G. Mikos, "Poly(Propylene Fumarate) Crosslinked with Poly(Ethylene Glycol)," U.S. Patent 6,384,105 (May 7, 2002).
12. S. He, M.J. Yaszemski, and A.G. Mikos, "Biodegradable Poly(Propylene Fumarate) Networks Crosslinked with Poly(Propylene Fumarate)-Diacylate Macromers," U.S. Patent 6,423,790 (July 23, 2002).
13. A.G. Mikos, R. Langer, J.P. Vacanti, L.G. Griffith, and G. Sarakinos, "Porous Biodegradable Polymeric Materials for Cell Transplantation," U.S. Patent 6,689,608 (February 10, 2004).
14. S. He, M.J. Yaszemski, and A.G. Mikos, "Biodegradable Poly(Propylene Fumarate) Networks Crosslinked with Poly(Propylene Fumarate)-Diacylate Macromers," U.S. Patent 6,759,485 (July 6, 2004).
15. S. Jo and A.G. Mikos, "Biocompatible Macromers," U.S. Patent 6,884,778 (April 26, 2005).
16. A.G. Mikos and S. Jo, "Functionalized Poly(Propylene Fumarate) and Poly(Propylene Fumarate-co-Ethylene Glycol)," European Patent No. 1,171,006 (March 29, 2006).
17. S. Jo and A.G. Mikos, "Oligo(Poly(Ethylene Glycol) Fumarate) Modified with Cell Adhesion Peptides," pending.
18. K. Tanahashi and A.G. Mikos, "Crosslinkable Degradable Compounds Modified with Guanidino Groups and Crosslinked Degradable Materials Modified with Guanidino Groups," pending.

11/10/08

19. J.P. Fisher and A.G. Mikos, "Photocrosslinking of Diethyl Fumarate/Poly(Propylene Fumarate) Biomaterials," pending.
20. H. Ueda, S. Jo, A.G. Mikos, D.M. Ammon, and J.C. Salamone, "Drug Delivery Compositions," pending.
21. C.G. Ambrose, T.A. Clyburn, and A.G. Mikos, "Antibiotic Microspheres for Treatment of Infections and Osteomyelitis," pending.
22. M.C. Hacker and A.G. Mikos, "Novel Injectable Macromonomers for the Fabrication of Hydrogels," pending.
23. B. Sitharaman, A.G. Mikos, L.J. Wilson, and X. Shi, "Carbon Nanotube Based Nanocomposites," pending.
24. A. Saraf, M.C. Hacker, and A.G. Mikos, "Novel Gene Delivery Vectors for Human Mesenchymal Stem Cells," pending.

Proceedings

1. A.G. Mikos, N.A. Peppas, and C.G. Takoudis, "Modeling of Suspension Copolymerization/Crosslinking of Styrene with Divinylbenzene," *Polym. Mater. Sci. Eng. Prepr.*, 52, 334-338 (1985).
2. N.A. Peppas and A.G. Mikos, "Polymer/Glycoprotein Chain Interpenetration in Bioadhesion," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 12, 86-87 (1985).
3. A.G. Mikos and N.A. Peppas, "The Kinetics of Preparation of PHEMA Microparticles by Suspension Copolymerization/Crosslinking with EGDMA," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 12, 210-211 (1985).
4. A.G. Mikos and N.A. Peppas, "Comparison of Experimental Techniques for the Measurement of the Bioadhesive Forces of Polymeric Materials with Soft Tissues," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 13, 97 (1986).
5. N.A. Peppas, A.G. Mikos, B.D. Barr-Howell, and L.M. Eshelman, "Dynamic Swelling of and Drug Release from Microparticles for Swelling-Controlled Release Applications," *Life Support Systems*, 4(2), 397-398 (1986).
6. A.G. Mikos, E. Mathiowitz, N.A. Peppas, and R. Langer, "A Method of Measuring Mucoadhesive Forces on Polymeric Microparticles," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 18, 109-110 (1991).
7. A.G. Mikos, G. Sarakinos, M.D. Lyman, D.E. Ingber, J.P. Vacanti, and R. Langer, "Prevascularization of Biodegradable Polymer Scaffolds for Hepatocyte Transplantation," *Polym. Mater. Sci. Eng. Prepr.*, 66, 34-35 (1992).
8. M.J. Yaszemski, A.G. Mikos, R.G. Payne, and W.C. Hayes, "Synthesis and Purification Reaction Schemes for Poly(Propylene Fumarate), A Novel Degradable Biomaterial for Orthopaedic Applications," *Trans. Soc. Biomater.*, 17, 460 (1994).
9. R.L. Cleek, A.A. Rege, L. Denner, S.G. Eskin, and A.G. Mikos, "Inhibition of Smooth Muscle Cell Proliferation via Controlled Release of Antisense Oligonucleotides," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 21, 246-247 (1994).
10. H.A. von Recum, R.L. Cleek, S.G. Eskin, and A.G. Mikos, "Molecular Weight Effects on Lactic Acid Release During Poly(L-Lactic Acid) Degradation," *Trans. Soc. Biomater.*, 18, 179 (1995).

11/10/08

11. M.J. Yaszemski, R.G. Payne, T.B. Aufdemorte, W.C. Hayes, R.S. Langer, and A.G. Mikos, "A Temporary Replacement for Trabecular Bone: The Design and Testing of a Novel Degradable Composite Material," *Trans. Soc. Biomater.*, 18, 184 (1995).
12. R.C. Thomson, G.G. Giordano, J.H. Collier, S.L. Ishaug, A.G. Mikos, D. Lahiri-Munir, S. Cumber, and C.A. Garcia, "Biodegradable Poly(a-Hydroxy Ester) Thin Films as Temporary Substrates for Retinal Pigment Epithelium Cell Transplantation," *Proceed. Bioeng. Conf.*, 29, 93-94 (1995).
13. S.L. Ishaug, M.J. Yaszemski, R. Bizios, T.B. Aufdemorte, and A.G. Mikos, "Osteoblast Migration on Biodegradable Poly(a-Hydroxy Esters)," *Proceed. Bioeng. Conf.*, 29, 149-150 (1995).
14. M.J. Miller, R.C. Thomson, E.K. Beahm, and A.G. Mikos, "Tissue-Engineered Vascularized Bone Using Biodegradable Polymers Combined with Organic Induction Factors," *Abstr. Eur. Symp. Contr. Drug Deliv.*, 4, 91-93 (1996).
15. S.L. Ishaug, G.M. Crane, and A.G. Mikos, "3-D Osteoblast Culture in Biodegradable Polymer Foams," *Trans. World Biomater. Congr.*, 5, I-288 (1996).
16. M.C. Wake, P.K. Gupta, and A.G. Mikos, "Pliable Degradable Polymer Foams to Engineer Soft Tissues," *Trans. World Biomater. Congr.*, 5, I-958 (1996).
17. A.C. Jen, S.L. Ishaug, M.J. Yaszemski, L.V. McIntire, and A.G. Mikos, "Three Dimensional *In Vitro* Mechanical Model for Bone Formation," *Trans. World Biomater. Congr.*, 5, I-979 (1996).
18. A.D. Ouellette, K.-H. Ruan, A.-L. Tsai, K.K. Wu, and A.G. Mikos, "A Poly(L-Lysine)/Anti-Thrombomodulin Conjugate for Targeted Gene Delivery to Endothelial Cells," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 23, 889-890 (1996).
19. S.L. Ishaug-Riley, G.M. Crane, A. Gurlek, M.J. Miller, A.W. Yasko, M.J. Yaszemski, and A.G. Mikos, "Ectopic Bone Formation Using Three Dimensional Osteoblast/Polymer Constructs," *Trans. Orthop. Res. Soc.*, 43, 545 (1997).
20. S.L. Ishaug-Riley, G.M. Crane, A. Gurlek, M.J. Miller, A.W. Yasko, M.J. Yaszemski, and A.G. Mikos, "Ectopic Bone Formation by Marrow Stromal Osteoblast Transplantation Using Poly(DL-Lactic-co-Glycolic Acid) Foams Implanted into the Rat Mesentery," *Trans. Soc. Biomater.*, 20, 1 (1997).
21. R.L. Cleek, A.A. Rege, L.A. Denner, S.G. Eskin, and A.G. Mikos, "Inhibition of Smooth Muscle Cell Growth *In Vitro* by an Antisense Oligodeoxynucleotide Released from Poly(DL-Lactic-co-Glycolic Acid) Microparticles," *Trans. Soc. Biomater.*, 20, 85 (1997).
22. L.J. Suggs, E.Y. Kao, R.S. Krishnan, C.W. Patrick, and A.G. Mikos, "Evaluation of a Biodegradable Block Copolymer for Use as a Vascular Implant," *Trans. Soc. Biomater.*, 20, 299 (1997).
23. M.S. Widmer, A.C. Jen, R.D. Bostrom, and A.G. Mikos, "Cell Seeding in Three Dimensional Scaffolds," *Trans. Soc. Biomater.*, 20, 467 (1997).
24. M.S. Widmer, G.R.D. Evans, K. Brandt, T. Savel, C.W. Patrick, Jr., and A.G. Mikos, "Porous Biodegradable Polymer Scaffolds for Nerve Regeneration," *Proceed. Bioeng. Conf.*, 35, 353-354 (1997).
25. S.J. Peter, J.A. Nolley, D.B. Kim, M.S. Widmer, P.S. Engel, A.W. Yasko, M.J. Yaszemski, and A.G. Mikos, "Curing Characteristics and Mechanical Properties of a Poly(Propylene Fumarate) Based Orthopaedic Biomaterial," *Proceed. Bioeng. Conf.*, 35, 359-360 (1997).

11/10/08

26. R.L. Cleek, R.J. Bjercke, A.A. Rege, S.G. Eskin, and A.G. Mikos, "Biodegradable Polymeric Carriers for a bFGF Antibody for Cardiovascular Application," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 24, 853-854 (1997).
27. G. Liu, S.G. Eskin, and A.G. Mikos, "Inhibitory Effects of b3 Integrin Antibody on the Migration of Vascular Adventitial Fibroblasts Induced by Basic Fibroblast Growth Factor," *Proceed. South. Biomed. Eng. Conf.*, 17, 14 (1998).
28. E. Yuksel, M. Widmer, R. Cleek, A. Weinfeld, M. Kattash, A.G. Mikos, S. Shenaq, and M. Spira, "Vascularized Perichondrial Flaps for *In Vivo* Tissue Engineering in Auricular Reconstruction: Two Rabbit Models," *Proceed. South. Biomed. Eng. Conf.*, 17, 19 (1998).
29. A. Weinfeld, E. Yuksel, S. Wamsley, J. Jensen, B. Boutros, R. Cleek, A.G. Mikos, S. Shenaq, and M. Spira, "Improvement of Free Fat Graft Survival: *In Vivo* Long-Term Delivery of IGF and Insulin Using PLGA/PEG Microspheres," *Proceed. South. Biomed. Eng. Conf.*, 17, 37 (1998).
30. L.J. Suggs, C.A. Garcia, and A.G. Mikos, "An Injectable, Biodegradable PEG Copolyester as a Carrier for Endothelial Cells," *Proceed. South. Biomed. Eng. Conf.*, 17, 66 (1998).
31. E. Yuksel, A. Jedrysiak, A. Weinfeld, A.G. Mikos, M. Spira, and S. Shenaq, "A Novel Fascio-Cutaneous Island Flap Model in the Rat for the Quantitative Analysis of Neo-Angiogenesis," *Proceed. South. Biomed. Eng. Conf.*, 17, 93 (1998).
32. S.J. Peter, C.R. Liang, D.J. Kim, M.S. Widmer, and A.G. Mikos, "Osteoblastic Phenotype of Marrow Stromal Cells Cultured in the Presence of Dexamethasone," *Proceed. South. Biomed. Eng. Conf.*, 17, 94 (1998).
33. E. Yuksel, R. Ray, S. Wamsley, A. Weinfeld, J. Waugh, M. Widmer, R. Cleek, A.G. Mikos, S. Shenaq, and M. Spira, "Soft Tissue Engineering *In Vivo* with PLGA Scaffolds and PLGA/PEG Microsphere Long Term Delivery of Lipogenic Factors," *Proceed. South. Biomed. Eng. Conf.*, 17, 144 (1998).
34. E. Yuksel, A.B. Weinfeld, J. Waugh, R. Cleek, A.G. Mikos, M. Spira, and S. Shenaq, "*In Vivo* Engineering of Vascularized Fat Flaps: Long-Term Delivery of Angiogenic Factors for Axially Neo-Vascularized Tissues," *Proceed. South. Biomed. Eng. Conf.*, 17, 147 (1998).
35. L.J. Suggs and A.G. Mikos, "*In Vitro* Thrombogenicity of an Injectable, Biodegradable PEG Copolyester," *Trans. Soc. Biomater.*, 21, 23 (1998).
36. M.S. Widmer, P.K. Gupta, G.R.D. Evans, K. Brandt, T. Savel, A. Gurlek, C.W. Patrick, Jr., and A.G. Mikos, "Manufacture and Characterization of Porous Biodegradable Polymer Conduits for Peripheral Nerve Regeneration," *Trans. Soc. Biomater.*, 21, 84 (1998).
37. S.J. Peter, S.T. Miller, G. Zhu, A.W. Yasko, and A.G. Mikos, "*In Vivo* Degradation of a Poly(Propylene Fumarate)/ β -Tricalcium Phosphate Injectable Composite Scaffold," *Trans. Soc. Biomater.*, 21, 91 (1998).
38. E. Yuksel, A.B. Weinfeld, J. Waugh, R. Cleek, A.G. Mikos, M. Spira, and S. Shenaq, "Use of a Biodegradable Long-Term Delivery System for Neovascularization in Prefabricated Fascial Flaps *In Vivo*," *Trans. Soc. Biomater.*, 21, 113 (1998).
39. G.R.D. Evans, K. Brandt, M.S. Widmer, J. Hodges, P.K. Gupta, J. Williams, A. Gurlek, R. Lohman, C.W. Patrick, and A.G. Mikos, "Poly(L-Lactic Acid) (PLLA) Biodegradable Nerve Scaffolds: Their Utilization in Peripheral Nerve Surgery," *Trans. Soc. Biomater.*, 21, 354 (1998).

11/10/08

40. A. Göpferich, S.J. Peter, C. Vergani, F.V. Burkensroda, and A.G. Mikos, "Biodegradable Block-Copolymers as Drug and Cell Carriers," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 25, 105-106 (1998).
41. W.T. Godbey, K.K. Wu, and A.G. Mikos, "Size Matters: Molecular Weight Affects the Efficiency of Poly(Ethylenimine) as a Gene Delivery Vehicle," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 25, 230-231 (1998).
42. L. Lu, S.J. Peter, G.N. Stamatas, and A.G. Mikos, "Polymeric Delivery Systems for Bone Growth Factors," *Polym. Prepr.*, 40, 277-278 (1999).
43. S.-L. He, M.J. Yaszemski, A.W. Yasko, and A.G. Mikos, "Development of a Biodegradable Bone Cement Based on Poly(Propylene Fumarate) and a Macromer," *Trans. Soc. Biomater.*, 22, 12 (1999).
44. J.E. Babensee, L.V. McIntire, A.G. Mikos, and C.W. Smith, "The Role of Complement in the Leukocyte Response to Biomaterial Implantation," *Trans. Soc. Biomater.*, 22, 24 (1999).
45. L. Lu, G.N. Stamatas, and A.G. Mikos, "Delivery of Transforming Growth Factor- β 1 from Poly(DL-Lactic-co-Glycolic Acid)/Poly(Ethylene Glycol) Microparticles," *Trans. Soc. Biomater.*, 22, 123 (1999).
46. L.J. Suggs, M.S. Shive, C.A. Garcia, J.M. Anderson, and A.G. Mikos, "In Vitro Cytotoxicity and In Vivo Biocompatibility of Poly(Propylene Fumarate-co-Ethylene Glycol) Hydrogels," *Trans. Soc. Biomater.*, 22, 334 (1999).
47. Q. Liu, S.-L. He, R. Bahulekar, and A.G. Mikos, "Porous Anionic Hydrogels Based on sIPNs of Poly(2-Hydroxyethyl Methacrylate) and Poly(Acrylic Acid)," *Trans. Soc. Biomater.*, 22, 368 (1999).
48. K.J.L. Burg, A.G. Mikos, R.J. Beiler, C.R. Culberson, K.G. Greene, A.B. Loeb sack, W.D. Roland, S. Wyatt, C.R. Halberstadt, W.D. Holder, Jr., and T.C. Burg, "Particulate Selection and Importance to Cell Adhesion in Solvent-Cast, Particulate-Leached Polymeric Constructs," *Trans. Soc. Biomater.*, 22, 524 (1999).
49. L. Lu, L.C. Kam, M. Hasenbein, R. Bizios, and A.G. Mikos, "Human Retinal Pigment Epithelium Cell Culture on Patterned Surfaces," *Proceed. Bioeng. Conf.*, 42, 3-4 (1999).
50. J.B. Oldham, B.D. Porter, T.-S. Tan, H. Brisby, B.L. Currier, A.G. Mikos, and M.J. Yaszemski, "Influence of Changes in Experimental Parameters on Size of PLGA Microspheres," *Proceed. Bioeng. Conf.*, 42, 681-682 (1999).
51. J.B. Oldham, B.D. Porter, T.E. Hefferan, B.L. Currier, A.G. Mikos, and M.J. Yaszemski, "Biologic Activity of rhBMP-2 Following Release from PLGA Microspheres," *Proceed. Bioeng. Conf.*, 42, 745-746 (1999).
52. B.D. Porter, J.B. Oldham, R.G. Payne, K.-N. An, B.L. Currier, A.G. Mikos, and M.J. Yaszemski, "Mechanical Properties of a Biodegradable Bone Regeneration Scaffold," *Proceed. Bioeng. Conf.*, 42, 747-748 (1999).
53. W.T. Godbey, K.K. Wu, G.J. Hirasaki, and A.G. Mikos, "Improved Packing of Poly(Ethylenimine)/DNA Complexes Increases Transfection Efficiency," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 26, 222-223 (1999).
54. W.T. Godbey, K.K. Wu, and A.G. Mikos, "Tracking the Intracellular Path of PEI/DNA Complexes for Gene Delivery," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 26, 813-814 (1999).
55. W.T. Godbey, K.K. Wu, and A.G. Mikos, "Synthetic Polymers for Non-Viral Gene Delivery," *Proceed. Asia-Pacific Conf. Med. Biol. Eng.*, 4, 81 (1999).

11/10/08

56. S.J. Peter, M.J. Miller, A.W. Yasko, M.J. Yaszemski, and A.G. Mikos, "Polymer Concepts in Tissue Engineering," *Trans. Acad. Dent. Mater.*, 13, 17-22 (1999).
57. W.T. Godbey and A.G. Mikos, "Recent Progress in Poly(Ethylenimine)-Mediated Gene Delivery," *Proceed. Res. Init. Conf. Vasc. Dis.*, 108-111 (2000).
58. G. Gogola, C. Ambrose, A. Peng, and A.G. Mikos, "PLGA/PEG Microspheres as an Antibiotic Delivery System," *Trans. Orthop. Res. Soc.*, 46, 1084 (2000).
59. J.S. Temenoff and A.G. Mikos, "Bone Tissue Engineering Using Biodegradable Polymer Scaffolds," *Proceed. Am. Acad. Orthop. Surg. Ann. Meet.*, 67, 5-6 (2000).
60. W.T. Godbey and A.G. Mikos, "Poly(Ethylenimine) as a Gene Delivery Vehicle and Its Potential for Tissue Engineering," *Abstr. Eur. Symp. Contr. Drug Deliv.*, 6, 33-35 (2000).
61. S. He, M.J. Yaszemski, P.S. Engel, and A.G. Mikos, "Injectable, *In Situ* Crosslinkable, Biodegradable Poly(Propylene Fumarate) Networks for Orthopaedic Tissue Engineering," *Trans. World Biomater. Congr.*, 6, 203 (2000).
62. W.T. Godbey, M.A. Barry, P. Saggau, K.K. Wu, and A.G. Mikos, "Transfection with Poly(Ethylenimine) Is More Like Hitting Cells with a Bullet than a Sponge," *Trans. World Biomater. Congr.*, 6, 254 (2000).
63. J.E. Babensee, L.V. McIntire, A.G. Mikos, and J. Rodgers, "Exogenous Antigen-Specific Immune Response Upon Biomaterial Contact," *Trans. World Biomater. Congr.*, 6, 399 (2000).
64. S. Jo, A.K. Shung, H. Shin, and A.G. Mikos, "Synthesis and Characterization of a Novel Poly(Ethylene Glycol) Macromer Based on Fumaric Acid," *Trans. World Biomater. Congr.*, 6, 547 (2000).
65. S. Jo and A.G. Mikos, "Modification of a Novel Poly(Ethylene Glycol) Macromer Based on Fumaric Acid with GRGD Peptide," *Trans. World Biomater. Congr.*, 6, 550 (2000).
66. J. Tessmar, A.G. Mikos, and A. Göpferich, "A New Biodegradable Polymer for the Modification of Surfaces: H₂N-Poly(Ethylene Glycol)-Poly(D,L-Lactic Acid)," *Trans. World Biomater. Congr.*, 6, 595 (2000).
67. R. Bahulekar, Q. Liu, and A.G. Mikos, "Synthesis and Characterization of Hydrogels Containing Sugar-Methacrylate Monomer," *Trans. World Biomater. Congr.*, 6, 1351 (2000).
68. W.T. Godbey, K.K. Wu, and A.G. Mikos, "Non-Viral Gene Delivery Affects Endothelial Cell Function and Viability," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 27, 76-77 (2000).
69. W.T. Godbey, M.A. Barry, P. Saggau, K.K. Wu, and A.G. Mikos, "Poly(Ethylenimine)-Mediated Transfection: A New Paradigm for Gene Delivery," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 27, 111-112 (2000).
70. J. Tessmar, A.G. Mikos, and A. Göpferich, "New Biodegradable Polymers for the Development of Biomimetic Biomaterials," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 27, 135-136 (2000).
71. W.T. Godbey and A.G. Mikos, "Non-Viral Gene Delivery Vectors," *Proceed. Intern. Symp. Biomater. Drug Deliv. Syst.*, 66 (2000).
72. J.S. Temenoff and A.G. Mikos, "Injectable Biodegradable Polymers for Tissue Engineering," *Surf. Biomater. Symp. Notebook*, 12-17 (2000).
73. A.G. Mikos, "Synthetic Biodegradable Polymer Scaffolds for Bone Tissue Engineering," *Trans. Soc. Biomater.*, 24, L (2001).

11/10/08

74. M.S. Wolfe, D. Dean, J.E. Chen, S. Han, C. Rimnac, S.A. Goldman, A.I. Caplan, L. Solchaga, and A.G. Mikos, "In Vitro Degradation of Poly(Propylene Fumarate)/ β -Tricalcium Phosphate Scaffolds," *Trans. Soc. Biomater.*, 24, 26 (2001).
75. J.S. Temenoff, R.G. LeBaron, K.A. Athanasiou, and A.G. Mikos, "Novel Laminated PEG-Fumarate Hydrogels for Tissue Engineering of Articular Cartilage," *Trans. Soc. Biomater.*, 24, 139 (2001).
76. S. He, J. Ulrich, R.G. Valenzuela, M. Zobitz, K.-N. An, B.L. Currier, A.G. Mikos, and M.J. Yaszemski, "Mechanical Properties of Biodegradable Poly(Propylene Fumarate)-Bone Fiber Composites During the Degradation Process," *Trans. Soc. Biomater.*, 24, 149 (2001).
77. M.D. Timmer, S. He, C.G. Ambrose, and A.G. Mikos, "Mechanical Properties of Photo-Initiated, Biodegradable Polymer Networks for Prefabricated Orthopaedic Scaffolds," *Trans. Soc. Biomater.*, 24, 193 (2001).
78. G.N. Bancroft, V.I. Sikavitsas, and A.G. Mikos, "Three-Dimensional Culture of Cell-Polymer Constructs in Bioreactors for Bone Tissue Engineering," *Trans. Soc. Biomater.*, 24, 562 (2001).
79. J. Tessmar, A.G. Mikos, and A. Göpferich, "Towards the Covalent Attachment of Insulin to Biodegradable Diblock Copolymers," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 28, 5091 (2001).
80. G.N. Bancroft, V.I. Sikavitsas, J. van den Dolder, J.A. Jansen, and A.G. Mikos, "Three-Dimensional Culture of Marrow Stromal Osteoblasts on Titanium Fiber Mesh Scaffolds in a Flow Perfusion Bioreactor," *Trans. Orthop. Res. Soc.*, 48, 215 (2002).
81. H. Shin and A.G. Mikos, "Biomimetic Biodegradable Hydrogels Modulating Marrow Stromal Osteoblast Adhesion," *Trans. Orthop. Res. Soc.*, 48, 536 (2002).
82. A.G. Mikos, "Injectable Biodegradable Hydrogels for Drug Delivery and Tissue Engineering," *Trans. Soc. Biomater.*, 25, 68 (2002).
83. J.W. Vehof, J.P. Fisher, D. Dean, P.H. Spauwen, A.G. Mikos, and J.A. Jansen, "Bone Formation in Transforming Growth Factor β -1-Coated Porous Poly(Propylene Fumarate) Scaffolds," *Trans. Soc. Biomater.*, 25, 146 (2002).
84. K. Tanahashi, S. Jo, and A.G. Mikos, "Synthesis of Injectable, Biodegradable Hydrogels of Poly(Propylene Fumarate-co-Ethylene Glycol) Modified with Agmatine for Enhanced Cell Adhesion," *Trans. Soc. Biomater.*, 25, 152 (2002).
85. F.M. Wale, C.N. Demers, A. Petit, J.S. Temenoff, V. Lim, J. Fisher, D. Zukor, O. Huk, A.G. Mikos, P. Roughley, and J. Antoniou, "Analysis of Poly(Propylene Fumarate-co-Ethylene Glycol) as a Scaffold for Use in Tissue Engineering of Intervertebral Disc: Retention of Collagen and Proteoglycan," *Trans. Soc. Biomater.*, 25, 193 (2002).
86. E. Behraves, K. Zygourakis, and A.G. Mikos, "Marrow Stromal Osteoblast Adhesion and Migration on Poly(Propylene Fumarate-co-Ethylene Glycol)-Based Hydrogels with a Covalently Linked GRGDS Peptide Sequence," *Trans. Soc. Biomater.*, 25, 235 (2002).
87. E.S. Steinbis, J.S. Temenoff, and A.G. Mikos, "Effect of Drying History on Swelling Properties of Oligo(Poly(Ethylene Glycol) Fumarate) Hydrogels for Guided Tissue Growth in Dental Applications," *Trans. Soc. Biomater.*, 25, 483 (2002).
88. E.L. Hedberg, A. Tang, R.S. Crowther, D.H. Carney, and A.G. Mikos, "Controlled Release of an Osteoinductive Peptide from Injectable, Biodegradable Polymeric Composite Scaffolds for Bone Tissue Engineering," *Trans. Soc. Biomater.*, 25, 498 (2002).

11/10/08

89. A.K. Shung, E. Behraves, S. Jo, and A.G. Mikos, "Characterization of an Injectable Poly(Propylene Fumarate-co-Ethylene Glycol) Block Copolymer Hydrogel Using a Water Soluble Crosslinking System," *Trans. Soc. Biomater.*, 25, 679 (2002).
90. M.N. Cooke, J.P. Fisher, C. Rimmnac, D. Dean, and A.G. Mikos, "Control of 3D Biodegradable Scaffold Geometry," *Trans. Soc. Biomater.*, 25, 681 (2002).
91. A.G. Mikos, E.L. Hedberg, S. Jo, F.K. Kasper, H. Shin, and J.S. Temenoff, "Injectable Biodegradable Hydrogels for Tissue Engineering," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 29, 83 (2002).
92. J.S. Temenoff, H. Shin, P.S. Engel, and A.G. Mikos, "Cytotoxicity of Redox Radical Initiators for Encapsulation of Mesenchymal Stem Cells," *Proceed. Eng. Med. Biol. Soc. Biomed. Eng. Soc. Joint Conf.*, 2, 831 (2002).
93. E.L. Hedberg, J.S. Temenoff, A. Tang, R.S. Crowther, D.H. Carney, and A.G. Mikos, "Controlled Release of a Tissue Inducing Peptide from Oligo(Poly(Ethylene Glycol) Fumarate) Hydrogels for Orthopaedic Tissue Engineering," *Proceed. Eng. Med. Biol. Soc. Biomed. Eng. Soc. Joint Conf.*, 2, 870 (2002).
94. E. Behraves, M.D. Timmer, J.J. Lemoine, M.A.K. Liebschner, and A.G. Mikos, "In Vitro Degradation of In Situ Crosslinkable Poly(Propylene Fumarate-co-Ethylene Glycol)-Based Macroporous Hydrogels," *Proceed. Eng. Med. Biol. Soc. Biomed. Eng. Soc. Joint Conf.*, 2, 999 (2002).
95. V.I. Sikavitsas, G.N. Bancroft, J. van den Dolder, T.L. Sheffield, J.A. Jansen, C.G. Ambrose, and A.G. Mikos, "Fluid Flow Increases Mineralized Matrix Deposition in Three-Dimensional Perfusion Culture of Marrow Stromal Osteoblasts in a Dose-Dependent Manner," *Proceed. Eng. Med. Biol. Soc. Biomed. Eng. Soc. Joint Conf.*, 2, 1151 (2002).
96. J.P. Fisher, Z. Lalani, N. Demian, M.E.K. Wong, and A.G. Mikos, "Immunohistochemical Characterization of Guided Bone Formation by a Biodegradable Tissue Engineering Scaffold in a Healing Tooth Socket of a Rabbit Model," *Proceed. Eng. Med. Biol. Soc. Biomed. Eng. Soc. Joint Conf.*, 2, 1321 (2002).
97. J.S. Blum, A.G. Mikos, and M.A. Barry, "Influence of Osteogenic Supplements on Gene Transfer and Expression in Rat Marrow Stromal Cells by Adenoviral, Retroviral, and Cationic Lipid Vectors for both Reporter and Therapeutic Proteins," *Trans. Orthop. Res. Soc.*, 49, 906 (2003).
98. L.A. Solchaga, J. Gao, J.S. Temenoff, A.G. Mikos, V.M. Goldberg, and A.I. Caplan, "Repair of Osteochondral Defects with Hyaluronan-, and Polyester-Based Scaffolds," *Trans. Orthop. Res. Soc.*, 49, 927 (2003).
99. J.S. Temenoff, H. Shin, and A.G. Mikos "Cytotoxicity of Components of Oligo(Poly(Ethylene Glycol) Fumarate)-Based Hydrogels for Encapsulation of Marrow Stromal Cells," *Trans. Soc. Biomater.*, 26, 89 (2003).
100. H. Shin, P.Q. Ruhé, J.A. Jansen, and A.G. Mikos, "In Vivo Bone and Soft Tissue Response to Biodegradable Oligo(Poly(Ethylene Glycol) Fumarate) Hydrogels," *Trans. Soc. Biomater.*, 26, 119 (2003).
101. M.E. Gomes, V.I. Sikavitsas, E. Behraves, R.L. Reis, and A.G. Mikos, "Effect of Flow Perfusion on Osteogenic Differentiation of Bone Marrow Stromal Cells Cultured on Starch Based Three-Dimensional Scaffolds," *Trans. Soc. Biomater.*, 26, 190 (2003).
102. V.I. Sikavitsas, G.N. Bancroft, H.L. Holtorf, J.A. Jansen, and A.G. Mikos, "Fluid Shear Forces Mediate the Osteogenic Differentiation of Marrow Stromal Osteoblasts in a Three-Dimensional Perfusion Culture," *Trans. Soc. Biomater.*, 26, 253 (2003).

11/10/08

103. J. van den Dolder, V.I. Sikavitsas, G.N. Bancroft, P.H.M. Spauwen, J.A. Jansen, and A.G. Mikos, "Cell/Titanium Bone Tissue Engineered Constructs Using a Rat Cranial Size Defect Model," *Trans. Soc. Biomater.*, 26, 633 (2003).
104. T.M.G. Chu, C.L. Flanagan, S.J. Hollister, S.E. Feinberg, J.P. Fisher, and A.G. Mikos, "The Mechanical and In Vivo Performance of 3-D Poly(Propylene Fumarate)/Tricalcium Phosphate Scaffolds," *Trans. Soc. Biomater.*, 26, 660 (2003).
105. E.L. Hedberg, H.C. Kroese-Deutman, J.J. Lemoine, C.K. Shih, R.S. Crowther, D.H. Carney, M.A.K. Liebschner, A.G. Mikos, and J.A. Jansen, "In Vivo Osteogenesis in Response to the Controlled Release of TP508 from Biodegradable Polymeric Scaffolds," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 30, 90 (2003).
106. T.A. Holland, Y. Tabata, and A.G. Mikos, "Controlled Release of TGF- β 1 from Gelatin Microparticles Encapsulated in Oligo(Poly(Ethylene Glycol) Fumarate) Hydrogels," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 30, 789 (2003).
107. H. Shin, K. Zygourakis, M.C. Farach-Carson, M.J. Yaszemski, and A.G. Mikos, "Modulation of Differentiation and Mineralization of Marrow Stromal Cells Cultured on Biomimetic Hydrogels Modified with an Osteopontin-Derived Peptide," *Trans. Orthop. Res. Soc.*, 50, 687 (2004).
108. M.A. Wettergreen, J.E. Pan, J.J. Lemoine, A.G. Mikos, and M.A.K. Liebschner, "Modification of Apparent Scaffold Properties Through Porogen Surface to Volume Ratio Manipulation," *Trans. Orthop. Res. Soc.*, 50, 747 (2004).
109. T.A. Holland, Z.S. Patel, Y. Tabata, and A.G. Mikos, "Growth Factor Delivery from Injectable Hydrogel Scaffolds for Tissue Engineering," *Abstr. Eur. Symp. Contr. Drug Deliv.*, 8, 29-30 (2004).
110. J.A. Jansen, J.W.M. Vehof, P.Q. Ruhé, H. Kroeze-Deutman, J.P. Fisher, E.L. Hedberg, and A.G. Mikos, "Growth Factor Loaded Scaffolds for Bone Engineering," *Abstr. Eur. Symp. Contr. Drug Deliv.*, 8, 31-32 (2004).
111. J.P. Fisher, S. Jo, A.G. Mikos, and A.H. Reddi, "Thermoreversible Hydrogel Scaffolds for Articular Cartilage Tissue Engineering," *Trans. World Biomater. Congr.*, 7, 4 (2004).
112. M.E. Gomes, C.M. Bossano, C.M. Johnston, R.L. Reis, and A.G. Mikos, "Expression of Bone Growth Factors by MSCs Cultured on Starch/Poly(ϵ -caprolactone) Scaffolds Using a Flow Perfusion Bioreactor," *Trans. World Biomater. Congr.*, 7, 5 (2004).
113. E.L. Hedberg, C.K. Shih, M.D. Timmer, J.J. Lemoine, M.A.K. Liebschner, J.A. Jansen, and A.G. Mikos, "In Vitro Degradation of Poly(Propylene Fumarate)-Based Controlled Release Scaffolds," *Trans. World Biomater. Congr.*, 7, 331 (2004).
114. M.E. Gomes, H.L. Holtorf, R.L. Reis, and A.G. Mikos, "Influence of the Porosity of Starch-Based Fiber Meshes on the Proliferation and Osteogenic Differentiation of Marrow Stromal Cells Cultured under Flow Perfusion," *Trans. World Biomater. Congr.*, 7, 376 (2004).
115. H.L. Holtorf, J.A. Jansen, and A.G. Mikos, "Effect of Dexamethasone on Osteodifferentiation of MSC/Scaffold Constructs under Flow Perfusion," *Trans. World Biomater. Congr.*, 7, 377 (2004).
116. E.L. Hedberg, H.C. Kroese-Deutman, C.K. Shih, R.S. Crowther, D.H. Carney, A.G. Mikos, and J.A. Jansen, "Controlled Release from Biodegradable Polymeric Scaffolds for Repair of Segmental Bone Defects," *Trans. World Biomater. Congr.*, 7, 556 (2004).

11/10/08

117. T.A. Holland, J.K. Tessmar, Y. Tabata, and A.G. Mikos, "Growth Factor Release from Injectable, Enzymatically-Degradable Hydrogel Composites for Cartilage Tissue Engineering," *Trans. World Biomater. Congr.*, 7, 617 (2004).
118. J.S. Temenoff, H. Park, E. Jabbari, T.L. Sheffield, R.G. LeBaron, C.G. Ambrose, and A.G. Mikos, "Swelling of Fumarate-Based Hydrogels Affects Osteogenic Differentiation of Embedded Marrow Stromal Cells," *Trans. World Biomater. Congr.*, 7, 899 (2004).
119. N. Datta, H.L. Holtorf, J.A. Jansen, and A.G. Mikos, "In Vitro Synthesis of Osteoinductive Extracellular Matrix for Bone Tissue Engineering," *Trans. World Biomater. Congr.*, 7, 1016 (2004).
120. J.K. Tessmar, C.R. Rieger, M.A. Burrell, and A.G. Mikos, "Synthesis of Unsaturated Fumarate-Based Macromers and their Crosslinked Hydrogels," *Trans. World Biomater. Congr.*, 7, 1058 (2004).
121. H. Ueda, S. Jo, D.M. Ammon, and A.G. Mikos, "Sustained Release of Fluocinolone Acetonide from Photo-Crosslinked Poly(Propylene Fumarate) Matrices," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 31, 333 (2004).
122. C.-Y. Lin, R.M. Schek, A.S. Mistry, X. Shih, A.G. Mikos, P.H. Krebsbach, and S.J. Hollister, "Functional Bone Tissue Engineering Using *Ex Vivo* Gene Therapy and Topology Optimized, Biodegradable Polymer Composite Scaffolds," *Trans. Orthop. Res. Soc.*, 51, 936 (2005).
123. T.A. Holland, E.W.H. Bodde, L.S. Baggett, Y. Tabata, A.G. Mikos, and J.A. Jansen, "Osteochondral Repair in the Rabbit Model Utilizing Oligo(Poly(Ethylene Glycol) Fumarate) Hydrogel Scaffolds," *Trans. Orthop. Res. Soc.*, 51, 1365 (2005).
124. M.A. Wettergreen, W. Sun, A.G. Mikos, and M.A.K. Liebschner, "Geometric Characterization of Scaffold Building Blocks for Tissue Engineering," *Trans. Orthop. Res. Soc.*, 51, 1719 (2005).
125. M.E. Gomes, R.L. Reis, and A.G. Mikos, "Bone Marrow Stromal Cells Cultured on Starch Based Three-Dimensional Scaffolds in a Flow Perfusion Bioreactor: A Promising *In-Vitro* Approach for Obtaining Bone Tissue Substitutes," *Trans. Orthop. Res. Soc.*, 51, 1743 (2005).
126. T.G. Chu, R.L. Stewart, S.J. Warden, C.H. Turner, and A.G. Mikos, "A Load-Bearing, Biodegradable BMP Carrier for Bone Regeneration in a Segmental Defect," *Trans. Orthop. Res. Soc.*, 51, 1750 (2005).
127. X. Shi, J. Hudson, P.P. Spicer, R. Krishnamoorti, J.M. Tour, and A.G. Mikos, "Rheological Behavior and Mechanical Reinforcement of Poly(Propylene Fumarate)-Based Single-Walled Carbon Nanotube Composites," *Trans. Soc. Biomater.*, 30, 66 (2005).
128. H.L. Holtorf, N. Datta, J.A. Jansen, and A.G. Mikos, "Pore Size of Fiber Mesh Scaffolds Affects the Osteoblastic Differentiation of Seeded Marrow Stromal Cells Cultured in a Flow Perfusion Bioreactor," *Trans. Soc. Biomater.*, 30, 251 (2005).
129. H.L. Holtorf, J.A. Jansen, and A.G. Mikos, "Flow Perfusion Culture Induces the Osteoblastic Differentiation of Marrow Stromal Cell-Scaffold Constructs in the Absence of Dexamethasone," *Trans. Soc. Biomater.*, 30, 346 (2005).
130. F.K. Kasper, S.K. Seidlits, M.A. Barry, and A.G. Mikos, "In Vitro Release of Plasmid DNA from Oligo(Poly(Ethylene Glycol) Fumarate) Hydrogels," *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 32, 585 (2005).
131. F.K. Kasper, T. Kushibiki, Y. Kimura, A.G. Mikos, and Y. Tabata, "In Vivo Release of Plasmid DNA from Composites of Oligo(Poly(Ethylene Glycol) Fumarate) and Cationized

11/10/08

- Gelatin Microspheres,” *Proceed. Intern. Symp. Control. Rel. Bioact. Mater.*, 32, 605 (2005).
132. M.C. Hacker, B.B. Ma, J.D. Kretlow, and A.G. Mikos, “Novel Macromers for the Fabrication of Injectable, Calcium-Binding Hydrogels,” *Trans. Soc. Biomater.*, 31, 26 (2006).
 133. F.K. Kasper, E. Jerkins, K. Tanahashi, M.A. Barry, Y. Tabata, and A.G. Mikos, “Characterization of DNA Release from Composites of Oligo(Poly(Ethylene Glycol) Fumarate) and Cationized Gelatin Microspheres *In Vitro*,” *Trans. Soc. Biomater.*, 31, 28 (2006).
 134. B. Sitharaman, L.A. Tran, R.D. Bolskar, S.D. Flamm, R. Muthupillai, A.G. Mikos, and L.J. Wilson, “Gd@ (Carbon Nanostructures) as Nanoprobes for Cellular Magnetic Resonance Imaging,” *Trans. Soc. Biomater.*, 31, 72 (2006).
 135. J.K. Tessmar, M.A. Burrell, A. Rivelli, A.M. Goepferich, and A.G. Mikos, “Modification of the Release from Oligo(Poly(Ethylene Glycol) Fumarate) Based Hydrogels by Copolymerization with Lipophilic Poly(Propylene Glycol),” *Trans. Control. Rel. Soc.*, 33, 29 (2006).
 136. F.K. Kasper, S. Young, K. Tanahashi, M.A. Barry, Y. Tabata, J.A. Jansen, and A.G. Mikos, “Evaluation of Bone Regeneration by DNA Release from Composites of Oligo(Poly(Ethylene Glycol) Fumarate) and Cationized Gelatin Microspheres in a Critical-Sized Calvarial Defect,” *Trans. Control. Rel. Soc.*, 33, 525 (2006).
 137. Z.S. Patel, Y. Tabata, and A.G. Mikos, “Gelatin Microparticles for the Controlled Release of an Angiogenic and an Osteogenic Growth Factor,” *Trans. Control. Rel. Soc.*, 33, 528 (2006).
 138. A. Saraf, M. Hacker, and A.G. Mikos, “Synthesis of a Poly(Ethylenimine) Conjugate of Hyaluronic Acid for Gene Delivery Applications,” *Trans. Control. Rel. Soc.*, 33, 934 (2006).
 139. H.-H. Chen, A.G. Mikos, Q.P. Pham, U. Sharma, and Z.-P. Luo, “Finite Element Analyses of Flow Field in Multilayer Nanofiber/Microfiber Scaffolds,” *Trans. Orthop. Res. Soc.*, 53, 1505 (2007).
 140. E. Christenson, W. Soofi, N. Cameron, and A.G. Mikos, “Biodegradable Fumarate-Based PolyHIPEs as Tissue Engineering Scaffolds,” *Trans. Orthop. Res. Soc.*, 53, 1518 (2007).
 141. E.M. Christenson, W. Soofi, J.L. Holmes, N.R. Cameron, and A.G. Mikos, “High Porosity Tissue Engineering Scaffolds by Emulsion Templating,” *Trans. Soc. Biomater.*, 32, 114 (2007).
 142. S.C.G. Leeuwenburgh, J.A. Jansen, and A.G. Mikos, “Functionalization of Oligo(Poly(Ethylene Glycol) Fumarate) Hydrogels with Finely Dispersed Calcium Phosphate Nanocrystals for Bone-Substituting Purposes,” *Trans. Soc. Biomater.*, 32, 400 (2007).
 143. H. Park, J.S. Temenoff, and A.G. Mikos, “*In Vitro* Chondrogenic Differentiation of Rabbit Marrow Stromal Cells Encapsulated in Oligo(Poly(Ethylene Glycol) Fumarate) Injectable Hydrogel Composites,” *Trans. Soc. Biomater.*, 32, 401 (2007).
 144. X. Shi, B. Sitharaman, Q.P. Pham, J.L. Hudson, L.J. Wilson, J.M. Tour, and A.G. Mikos, “*In Vitro* Cytotoxicity of Single-Walled Carbon Nanotube/Poly(Propylene Fumarate) Nanocomposites,” *Trans. Soc. Biomater.*, 32, 435 (2007).

11/10/08

145. S.A. Chew, M.C. Hacker, and A.G. Mikos, "Biodegradable Hyperbranched Polycationic Polymers with Varying Hydrophilic Spacer Length for Gene Delivery," *Trans. World Biomater. Congr.*, 8, 1117 (2008).
146. A.G. Mikos and F.K. Kasper, "Tissue Engineering and Its Future Perspective," *Trans. World Biomater. Congr.*, 8, 1226 (2008).
147. B. Sitharaman, X. Shi, X.F. Walboomers, H. Liao, V. Cuijpers, L.J. Wilson, A.G. Mikos, and J.A. Jansen, "Ultra-Short Single Walled Carbon Nanotube/Biodegradable Polymer Nanocomposites for Bone Tissue Engineering: Hard and Soft Tissue Responses in a Rabbit Model," *Trans. World Biomater. Congr.*, 8, 1227 (2008).
148. J. Liao, X. Guo, Q.P. Pham, F.K. Kasper, and A.G. Mikos, "Effect of Transforming Growth Factor- β 1 on Chondrogenic Differentiation of Mesenchymal Stem Cells Cultured on Biodegradable Microfiber Scaffolds," *Trans. World Biomater. Congr.*, 8, 1228 (2008).
149. L. Klouda, M.C. Hacker, J.D. Kretlow, and A.G. Mikos, "Novel Thermoresponsive, *In Situ* Crosslinkable Hydrogels for Tissue Engineering," *Trans. World Biomater. Congr.*, 8, 1229 (2008).
150. M. van der Zande, B. Sitharaman, A. Veltien, X.F. Walboomers, J.S. Ananta, L.J. Wilson, A.G. Mikos, A. Heerschap, and J.A. Jansen, "*In Vivo* MRI Visualization of the Distribution Pattern of Gadolinium Labeled Single Walled Carbon Nanotubes Released from Subcutaneous Implanted Poly(Lactic-co-Glycolic Acid) Scaffolds in Rats," *Trans. World Biomater. Congr.*, 8, 1521 (2008).
151. S. Danti, D. D'Alessandro, A.S. Mistry, A. Saraf, S. Berrettini, and A.G. Mikos, "Tissue Engineered Constructs as Human Ossicular Chain Replacements," *Trans. World Biomater. Congr.*, 8, 1719 (2008).
152. A.M. Martins, Q.P. Pham, P.B. Malafaya, R.A. Sousa, M.E. Gomes, F.K. Kasper, R.L. Reis, and A.G. Mikos, "The Role of Lipase and α -amylase in both the Degradation of Starch/Polycaprolactone Fiber Meshes and the Osteogenic Differentiation of Rat Marrow Stromal Cells," *Trans. World Biomater. Congr.*, 8, 1931 (2008).

Abstracts

1. A.G. Mikos, C.G. Takoudis, and N.A. Peppas, "Modeling of Suspension Copolymerization/Crosslinking of Styrene," *Abstr. AIChE Meeting*, Abstract 48i (November 1984).
2. N.A. Peppas and A.G. Mikos, "Molecular Aspects of Polymer Adhesion on Mucus," *Abstr. ACS, 190*, Abstract INDE-35 (1985).
3. A.G. Mikos, C.G. Takoudis, and N.A. Peppas, "Kinetic Modelling of Copolymerization Crosslinking Reactions," *Abstr. AIChE Meeting*, Abstract 113e (November 1985).
4. N.A. Peppas and A.G. Mikos, "Interfacial Phenomena Related to Bioadhesion of Polymers on the Intestinal Mucus," *Abstr. AIChE Meeting*, Abstract 125b (November 1985).
5. N.A. Peppas and A.G. Mikos, "The Bioadhesive Behavior of 2-Hydroxyethyl Methacrylate-Containing Copolymer Microparticles with Aqueous Gels of Bovine Submaxillary Mucin," *Abstr. Eur. Congr. Biomater.*, Abstract 12 (September 1986).
6. N.A. Peppas and A.G. Mikos, "Polymer Microparticles on Biological Surfaces," *Abstr. AIChE Meeting*, Abstract 68h (November 1986).
7. A.G. Mikos and N.A. Peppas, "Crack Healing of Polymer-Polymer Interfaces of Linear Polymers," *Abstr. MRS Meeting*, Abstract L3.3 (November 1987).

11/10/08

8. A.G. Mikos and N.A. Peppas, "Effect of Chain Entanglements on the Fracture Characteristics of Polymeric Materials," *Abstr. MRS Meeting*, Abstract L8.15 (November 1987).
9. A.G. Mikos and R. Langer, "Preparation and Characterization of Poly(L-Lactic Acid) Foams," *Abstr. AIChE Meeting*, Abstract 246c (November 1990).
10. A.G. Mikos, "Fracture of and Adhesion between Biological and Synthetic Macromolecular Materials," *Abstr. ACS, Coll. Surf. Chem. Div.*, 65, LaMer Lecture (1991).
11. A.G. Mikos, A.M. Whiteman, A.J. Thorsen, J.E. Stein, D. Ingber, J.P. Vacanti, and R. Langer, "Creep Behavior of Poly(Lactic-co-Glycolic Acid) Foams for Liver Regeneration," *Abstr. AIChE Meeting*, Abstract 3f (November 1991).
12. J.E. Stein, A.G. Mikos, G. Sarakinos, J.C. Gilbert, D. Ingber, J.P. Vacanti, and R. Langer, "Polymer Scaffolds for Hepatocyte Transplantation," *Abstr. AIChE Meeting*, Abstract 3g (November 1991).
13. C.A. Vacanti, J.P. Vacanti, L. Cima, A.G. Mikos, and R. Langer, "Synthetic Biodegradable Polymers Can Be Configured to Act as a Template for Cell Transplantation and the Generation of New Cartilage and Bone," *Abstr. AIChE Meeting*, Abstract 3i (November 1991).
14. L.E. Freed, S.B. Weinstock, A.G. Mikos, J.C. Marquis, A. Nohria, A.J. Grodzinsky, and R. Langer, "Chondrocytes Cultured on Synthetic Biodegradable Polymers Grow and Secrete a Cartilage-Like Matrix," *Abstr. AIChE Meeting*, Abstract 3j (November 1991).
15. A.G. Mikos, H.-L. Lai, S.M. Leite, J.A. Tamada, and R. Langer, "Characterization of Degradation of Poly(L-Lactic Acid) Foams," *Abstr. AIChE Meeting*, Abstract 15e (November 1991).
16. A.G. Mikos, D.E. Ingber, J.P. Vacanti, and R. Langer, "Hepatocyte Transplantation with Prevascularized Biodegradable Polymer Foams," *Abstr. HSEMB Confer.*, 10, Abstract 31 (March 1992).
17. A.G. Mikos, "Biodegradable Bioadhesive Systems," *Abstr. Jerusalem Conference Pharmac. Sci. Clinic. Pharmacol.*, 2, Abstract 15c (May 1992).
18. A.G. Mikos, Y. Bao, L.G. Cima, D.E. Ingber, J.P. Vacanti, and R. Langer, "Bonded Poly(Glycolic Acid) Fiber Structures for Cell Transplantation," *Abstr. AIChE Meeting*, Abstract 175b (November 1992).
19. K. Zygorakis and A.G. Mikos, "Discrete Modeling of Surface Erosion of Biodegradable Copolymers," *Abstr. AIChE Meeting*, Abstract 178e (November 1992).
20. A.G. Mikos, "Biodegradable Polymer Scaffolding for Tissue Regeneration and Repair," *Abstr. HSEMB Confer.*, 11, Abstract 76 (February 1993).
21. M.J. Yaszemski, A.G. Mikos, W.C. Hayes, and R. Langer, "A Temporary Replacement for Trabecular Bone: Design, Synthesis, and Characterization of a Degradable Polymeric Biomaterial," *Abstr. AIChE Meeting*, Abstract 119b (November 1993).
22. M.C. Wake, C.W. Patrick, Jr., and A.G. Mikos, "Creation of Vascularized Beds for Cell Transplantation," *Abstr. AIChE Meeting*, Abstract 119c (November 1993).
23. R.G. Payne, A.G. Mikos, and M.J. Yaszemski, "The Influence of Polymer Molecular Weight on Compressive Strength of a Composite for Use in Biodegradable Bone Cement," *Abstr. HSEMB Confer.*, 12, Abstract 60 (February 1994).
24. R.C. Thomson, M.J. Yaszemski, J.M. Powers, and A.G. Mikos, "Biodegradable Poly(Lactic-co-Glycolic Acid) Scaffolds to Engineer Bone," *Abstr. HSEMB Confer.*, 12, Abstract 97 (February 1994).

11/10/08

25. S.L. Ishaug, M.J. Yaszemski, R. Bizios, and A.G. Mikos, "Osteoblast Culture on Biodegradable Polymers as an *In Vitro* Model of Bone Regeneration," *Abstr. HSEMB Confer.*, 12, Abstract 98 (February 1994).
26. G.G. Giordano, D. Lahiri-Munir, S.L. Ishaug, A.G. Mikos, and C.A. Garcia, "RPE Culture on Biodegradable Polymer Substrates," *Invest. Ophthalm. & Visual Sci.*, 35, Abstract 2346-29 (March 1994).
27. A.G. Mikos, "Polymer/Cell Constructs to Engineer Organs," *Abstr. Intern. ITV Confer.*, 5, Abstract I2 (June 1994).
28. A.G. Mikos, "Osteoblast Culture on Biodegradable Polymer Scaffolds to Engineer Bone," *Abstr. World Congr. Biomech.*, 2, Abstract II-22b (July 1994).
29. A.G. Mikos, "Bioadhesive Polymers for Controlled Drug Delivery," *Abstr. Surf. Biomater. Symp.*, Abstract 86 (September 1994).
30. G.G. Giordano, D. Lahiri-Munir, R.C. Thomson, S.L. Ishaug, A.G. Mikos, and C.A. Garcia, "Biodegradable Polymer Substrates for Retinal Pigment Epithelium Cell Transplantation," *Annals Biomed. Eng.*, 22, Abstract 131 (October 1994).
31. R.L. Cleek, C. Stine, A.A. Rege, L. Denner, S.G. Eskin, and A.G. Mikos, "Antisense Oligonucleotide Delivery Targeted to Tenascin via Biodegradable Polymer Systems to Inhibit SMC Growth," *Annals Biomed. Eng.*, 22, Abstract 175 (October 1994).
32. M.J. Yaszemski, R.G. Payne, T.B. Aufdemorte, W.C. Hayes, R.S. Langer, and A.G. Mikos, "The Uncatalyzed Synthesis of Poly(Propylene Fumarate), Its Strength and Bone Ingrowth Characteristics as a Material for Orthopaedic Use," *Annals Biomed. Eng.*, 22, Abstract 284 (October 1994).
33. R.C. Thomson, M.J. Yaszemski, J.M. Powers, and A.G. Mikos, "Fabrication of Poly(Lactic-co-Glycolic Acid)/Glass Ceramic Fiber Composite Foams for Orthopaedic Applications," *Annals Biomed. Eng.*, 22, Abstract 287 (October 1994).
34. R.L. Cleek, A.A. Rege, L. Denner, S.G. Eskin, and A.G. Mikos, "Antisense Oligonucleotides Released from a Biodegradable Polymer Matrix Inhibit Smooth Muscle Cell Proliferation," *Abstr. AIChE Meeting*, Abstract 45f (November 1994).
35. S.L. Ishaug, S.A. Hoffman, M.J. Yaszemski, R. Bizios, and A.G. Mikos, "Osteoblast Culture on Poly(a-hydroxy esters) as an *In Vitro* Model of Bone Engineering," *Abstr. AIChE Meeting*, Abstract 46c (November 1994).
36. H.A. von Recum, R.L. Cleek, S.G. Eskin, and A.G. Mikos, "Modulated Release of Lactic Acid During Poly(L-Lactic Acid) Degradation," *Abstr. AIChE Meeting*, Abstract 204e (November 1994).
37. A.G. Mikos, "Polymer Fabrication," *Abstr. BioEast'95*, Abstract 2E-1 (January 1995).
38. M.J. Yaszemski, R.G. Payne, T.B. Aufdemorte, W.C. Hayes, R.S. Langer, and A.G. Mikos, "A Temporary Replacement for Trabecular Bone: The Design and Testing of a Novel Degradable Composite Biomaterial," *Abstr. HSEMB Confer.*, 13, Abstract 58 (February 1995).
39. R.C. Thomson, M.J. Yaszemski, J.M. Powers, T. Harrigan, and A.G. Mikos, "Reinforcement of Poly(a-Hydroxy Ester) Foams for Orthopedic Application Using Hydroxyapatite Short Fibers," *Abstr. HSEMB Confer.*, 13, Abstract 59 (February 1995).
40. S.L. Ishaug, M.J. Yaszemski, R. Bizios, T.B. Aufdemorte, and A.G. Mikos, "Migratory Characteristics of Osteoblast and Bone Cultures on Synthetic Biodegradable Polymers," *Abstr. HSEMB Confer.*, 13, Abstract 60 (February 1995).

11/10/08

41. M.J. Miller, D.P. Goldberg, A.W. Yasko, and A.G. Mikos, "An *In-Vivo* Model for Tissue Engineered Bone Flaps," *Abstr. HSEMB Confer.*, 13, Abstract 61 (February 1995).
42. R.L. Cleek, A.A. Rege, L. Denner, S.G. Eskin, and A.G. Mikos, "Antisense Oligonucleotides Released from a Biodegradable Polymer Matrix Inhibit Smooth Muscle Cell Proliferation," *Abstr. HSEMB Confer.*, 13, Abstract 73 (February 1995).
43. A.G. Mikos, S.L. Ishaug, R.C. Thomson, R.G. Payne, and M.J. Yaszemski, "Engineering Human Trabecular Bone," *Abstr. AAAS Meeting*, Abstract 99 (February 1995).
44. R.C. Thomson, J.H. Colier, A.G. Mikos, C.A. Garcia, and G.G. Giordano, "Physical Characteristics of Biodegradable Polymer Substrates for RPE Cells," *Invest. Ophthalm. & Visual Sci.*, 36, Abstract 1135-83 (March 1995).
45. G.G. Giordano, I.H. Husaini, D. Lahiri-Munir, A.G. Mikos, and C.A. Garcia, "Biodegradable Polymer Films for RPE Cell Transplantation," *Invest. Ophthalm. & Visual Sci.*, 36, Abstract 1138-86 (March 1995).
46. G.M. Crane, S.L. Ishaug, M.J. Miller, A.W. Yasko, T.B. Aufdemorte, M.J. Yaszemski, and A.G. Mikos, "Bone Formation Using Porous Poly(Lactic-co-Glycolic Acid) Seeded with Stromal Osteoblast Cells," *Annals Biomed. Eng.*, 23, Abstract 218 (October 1995).
47. M.J. Miller, D.P. Goldberg, A.W. Yasko, J.C. Lemon, W.C. Satterfield, and A.G. Mikos, "An *In Vivo* Model for Tissue-Engineered Bone Flaps," *Annals Biomed. Eng.*, 23, Abstract 244 (October 1995).
48. A.G. Mikos, "Engineering Trabecular Bone Using Biodegradable Polymers," *Abstr. Taniguchi Confer.*, 7, Abstract 5-2 (November 1995).
49. A.D. Ouellette, J.-L. Tang, A.-L. Tsai, K.K. Wu, and A.G. Mikos, "Targeted Gene Delivery to Endothelial Cells to Prevent Thrombosis and Restenosis," *Abstr. AIChE Meeting*, Abstract 230d (November 1995).
50. A.C. Jen, S.L. Ishaug, M.J. Yaszemski, L.V. McIntire, and A.G. Mikos, "Three Dimensional *In Vitro* Polymer-Matrix/Cell Model for Bone Formation," *Abstr. AIChE Meeting*, Abstract 231d (November 1995).
51. M.J. Miller, D.P. Goldberg, A.W. Yasko, J.C. Lemon, W.C. Satterfield, M.C. Wake, A.G. Mikos, and M.J. Yaszemski, "Prefabricated Bone Flaps in Sheep," *Abstr. Am. Soc. Reconstr. Microsurg.*, 11, Abstract 39 (January 1996).
52. G.M. Crane, S.L. Ishaug, M.J. Miller, M.J. Yaszemski, and A.G. Mikos, "Three-Dimensional Bone Formation Using Biodegradable Polymer/Stromal Osteoblast Constructs," *Abstr. Keystone Symposium on Tissue Engineering*, Abstract 104 (January 1996).
53. M.J. Yaszemski and A.G. Mikos, "Degradable Polymers with Osteoblast Transplantation as Strategies for Bone Tissue Engineering," *Cytotechnology*, 17, Abstract 11 (January 1996).
54. A.D. Ouellette, K.-H. Ruan, A.-L. Tsai, K.K. Wu, and A.G. Mikos, "Synthesis and Characterization of a Poly(L-lysine)/Anti-Thrombomodulin Conjugate for Targeted Gene Delivery to Endothelial Cells," *Abstr. HSEMB Confer.*, 14, Abstract 37 (February 1996).
55. S.J. Peter, P.A. Engel, L.B. Alemany, M.J. Miller, M.J. Yaszemski, and A.G. Mikos, "Synthesis and Characterization of an Osteoinductive, Injectable, Biodegradable Bone Cement," *Abstr. HSEMB Confer.*, 14, Abstract 39 (February 1996).
56. M.C. Wake, P.K. Gupta, and A.G. Mikos, "Fabrication of Pliable Biodegradable Polymer Foams to Engineer Soft Tissues," *Abstr. HSEMB Confer.*, 14, Abstract 40 (February 1996).

11/10/08

57. S.L. Ishaug, G.M. Crane, M.J. Yaszemski, and A.G. Mikos, "Three-Dimensional Calvaria Osteoblast Culture in Biodegradable Polymer Scaffolds," *Abstr. HSEMB Confer., 14*, Abstract 43 (February 1996).
58. A.C. Jen, S.L. Ishaug, M.J. Yaszemski, L.V. McIntire, and A.G. Mikos, "Three Dimensional *In Vitro* Mechanical Model for Bone Formation," *Abstr. HSEMB Confer., 14*, Abstract 44 (February 1996).
59. E.K. Beahm, R.C. Thomson, M.J. Yaszemski, A.G. Mikos, and M.J. Miller, "Guided Bone Growth in Sheep," *Abstr. HSEMB Confer., 14*, Abstract 45 (February 1996).
60. S.L. Ishaug, G.M. Crane, M.J. Miller, M.J. Yaszemski, and A.G. Mikos, "Bone Formation Using Stromal Osteoblasts Cultured in Biodegradable Polymer Foams," *Abstr. HSEMB Confer., 14*, Abstract 107 (February 1996).
61. L.J. Suggs, M.J. Yaszemski, K.K. Wu, and A.G. Mikos, "The Synthesis and Characterization of a Novel Block Copolymer Consisting of Poly(Propylene Fumarate) and Poly(ethylene glycol)," *Abstr. HSEMB Confer., 14*, Abstract 108 (February 1996).
62. A.G. Mikos, "Biomaterials for Tissue Engineering," *Abstr. MRS Meeting*, Abstract Y1.9 (April 1996).
63. L. Lu, R.C. Thomson, A.G. Mikos, R.C. Hunt, G.G. Giordano, C.A. Garcia, and D. Lahiri-Munir, "Human RPE Like Cell Culture on Biodegradable Polymer Substrates," *Invest. Ophthalm. & Visual Sci.*, 37, Abstract 467-B379 (February 1996).
64. A.G. Mikos, "Osteoblast Transplantation and Bone Tissue Engineering," *Exp. Clin. Endocrinol. Diabetes*, 104 (3), Abstract L28 (June 1996).
65. A.C. Jen, A.G. Mikos, J. Mayer, and E. Wintermantel, "Biocompatible Fiber-Reinforced Composites for Culturing Osteoblasts," *Annals Biomed. Eng.*, 24, Abstract 453 (October 1996).
66. J.A. Nolley, S.J. Peter, A.W. Yasko, M.J. Yaszemski, and A.G. Mikos, "Degradation Study of a Poly(Propylene Fumarate) Based Biodegradable Bone Cement," *Abstr. TES Meeting*, Abstract 10 (December 1996).
67. A.W. Yasko, S.L. Ishaug-Riley, G.M. Crane, D.A. Ray, and A.G. Mikos, "Orthotopic Bone Formation Using Three Dimensional Osteoblast/Polymer Constructs," *Abstr. TES Meeting*, Abstract 19 (December 1996).
68. M.J. Miller, A.G. Mikos, M.A. Schusterman, and L.V. McIntire, "The Evolution of a Strategy for Progress in Tissue Engineering," *Abstr. TES Meeting*, Abstract 48 (December 1996).
69. G.R.D. Evans, K. Brandt, A.G. Mikos, E. Peden, G.M. Crane, and S.L. Ishaug-Riley, "Biodegradable Tissue Engineered Polymer Nerve Conduits: Their Use as Scaffold in Peripheral Nerve Regeneration," *Abstr. TES Meeting*, Abstract 95 (December 1996).
70. D.J. Kim, S.J. Peter, A.W. Yasko, M.J. Yaszemski, and A.G. Mikos, "Osteoblastic Cellular Behavior on a Poly(Propylene Fumarate) Based Orthopaedic Biomaterial," *Abstr. HSEMB Confer., 15*, Abstract 92 (February 1997).
71. M.S. Widmer, G.R.D. Evans, K. Brandt, T. Savel, C.W. Patrick, Jr., and A.G. Mikos, "Manufacture of Porous Biodegradable Polymer Scaffolds for Nerve Regeneration," *Abstr. HSEMB Confer., 15*, Abstract 116 (February 1997).
72. G.R.D. Evans, K. Brandt, M.C. Wake, P. Gupta, T. Savel, M.S. Widmer, C.W. Patrick, Jr., and A.G. Mikos, "Tissue Engineered Nerve Conduits: The Use of Biodegradable Polymer Scaffolds in Peripheral Nerve Regeneration. A Preliminary Report," *Abstr. HSEMB Confer., 15*, Abstract 117 (February 1997).

11/10/08

73. R.L. Cleek, A.A. Rege, L. Denner, S.G. Eskin, and A.G. Mikos, "bFGF Antibody Released from Biodegradable Polymer Microparticles Inhibits bFGF-Stimulated Smooth Muscle Cell Proliferation," *Abstr. HSEMB Confer.*, 15, Abstract 159 (February 1997).
74. L. Lu, C.A. Garcia, and A.G. Mikos, "Morphological and Structural Properties of a Human RPE Cell Line Cultured on Synthetic Biodegradable Polymers," *Abstr. HSEMB Confer.*, 15, Abstract 185 (February 1997).
75. A.G. Mikos, S.L. Riley, G.M. Crane, M.J. Miller, M.J. Yaszemski, and A.W. Yasko, "Cell Based Delivery Systems for Bone Growth Factors," *Abstr. Intern. Symp. Rec. Adv. Drug Deliv. Syst.*, 8, pp. 27-28 (February 1997).
76. M. Smith, M.J. Miller, G.M. Crane, A. Khoo, A. Gurlek, and A.G. Mikos, "Cranial Defect Repair with Osteoblast Transplantation," *Abstr. Plast. Surg. Res. Counc.*, 42, Abstract 93 (February 1997).
77. L. Lu, A.G. Mikos, and C.A. Garcia, "Morphological and Structural Properties of a Human RPE Cell Line Cultured on Biodegradable Polymer Substrates," *Invest. Ophthalm. & Visual Sci.*, 38, Abstract 1566-B359 (March 1997).
78. L. Lu, A.G. Mikos, and C.A. Garcia, "Morphological and Structural Properties of a Human RPE Cell Line Cultured on Biodegradable Polymer Substrates," *Abstr. ACS*, 213, Abstract COLL-297 (April 1997).
79. L. Lu, C.A. Garcia, and A.G. Mikos, "Retinal Pigment Epithelium Tissue Engineering," *Artif. Organs*, 21, Abstract 78 (June 1997).
80. A.G. Mikos, "Polymeric Delivery Systems for Antisense Oligonucleotides," *Abstr. Whitaker Found. Biomed. Eng. Res. Conf.*, Abstract 45 (July 1997).
81. A.G. Mikos, S.L. Riley, R.C. Thomson, G.M. Crane, A. Gurlek, M.J. Miller, A.W. Yasko, and M.J. Yaszemski, "Guided Bone Regeneration Using Biodegradable Polymer Scaffolds," *Abstr. Smith & Nephew Intern. Symp. Adv. Tissue Eng. Biomater.*, 1, Abstract S13 (July 1997).
82. G.M. Crane, M. Smith, A. Gurlek, A.K.M. Khoo, M.J. Miller, and A.G. Mikos, "Rat Cranial Defect Repair by Marrow Stromal Osteoblast Transplantation," *Abstr. Smith & Nephew Intern. Symp. Adv. Tissue Eng. Biomater.*, 1, Abstract S19 (July 1997).
83. K. Brandt, G.R.D. Evans, M. Widmer, T. Savel, A. Gurlek, R. Lohman, A. Nabawi, J. Williams, C. Patrick, and A.G. Mikos, "Tissue Engineered Nerve Using Biodegradable PLGA Conduits," *Abstr. Smith & Nephew Intern. Symp. Adv. Tissue Eng. Biomater.*, 1, Abstract P2 (July 1997).
84. E. Yuksel, R. Cleek, J. Jensen, A. Weinfeld, A.G. Mikos, S. Shenaq, and M. Spira, "Delivery of Insulin, IGF-1, bFGF and VEGF in PLGA/PEG Microparticles to Augment Adiposofascial Flaps," *Annals Biomed. Eng.*, 25, Abstract 17 (October 1997).
85. L.J. Suggs, R.S. Krishnan, S.J. Peter, and A.G. Mikos, "In Vitro Degradation of a Crosslinked Poly(Ethylene Glycol) Copolyester," *Annals Biomed. Eng.*, 25, Abstract 34 (October 1997).
86. M.J. Miller, A. Khoo, R.C. Thomson, J.C. Lemon, A. Gurlek, and A.G. Mikos, "Vascularized Tissue Scaffold Apparatus for Guided Tissue Growth," *Annals Biomed. Eng.*, 25, Abstract 142 (October 1997).
87. G.R.D. Evans, K. Brandt, M. Widmer, T. Savel, A. Gurlek, R. Lohman, A. Nawabi, J. Williams, C. Patrick, and A.G. Mikos, "Tissue Engineered Nerve Conduits: Their Use in Peripheral Nerve Surgery," *Annals Biomed. Eng.*, 25, Abstract 243 (October 1997).

11/10/08

88. S.J. Peter, D.J. Kim, and A.G. Mikos, "Three-Dimensional Bone Formation in Injectable, Biodegradable Polymer Scaffolds," *Annals Biomed. Eng.*, 25, Abstract 252 (October 1997).
89. W.T. Godbey, K.K. Wu, and A.G. Mikos, "Size Matters: Molecular Weight Affects the Efficiency of Poly(Ethylenimine) as a Gene Delivery Vehicle," *Abstr. HSEMB Confer.*, 16, Abstract 32 (April 1998).
90. G.R.D. Evans, K. Brandt, M.S. Widmer, R.K. Meszlenyi, J. Hodges, P.K. Gupta, J. Williams, A. Gürlek, R. Lohman, C.W. Patrick, and A.G. Mikos, "Poly(L-Lactic Acid) (PLLA) Biodegradable Nerve Scaffolds for Peripheral Nerve Regeneration," *Abstr. HSEMB Confer.*, 16, Abstract 44 (April 1998).
91. M.J. Miller, A. Khoo, R.C. Thomson, J.C. Lemon, A. Gürlek, and A.G. Mikos, "In Vivo Fabrication of Vascularized Tissue Scaffolds," *Abstr. HSEMB Confer.*, 16, Abstract 46 (April 1998).
92. C.R. Liang, S.J. Peter, D.J. Kim, M.S. Widmer, and A.G. Mikos, "Osteoblastic Phenotype of Marrow Stromal Cells Cultured in the Presence of Dexamethasone," *Abstr. HSEMB Confer.*, 16, Abstract 47 (April 1998).
93. G. Liu, S.G. Eskin, and A.G. Mikos, "Basic Fibroblast Growth Factor-Stimulated Adventitial Fibroblast Migration Due to β_3 Integrin Regulation," *Abstr. HSEMB Confer.*, 16, Abstract 143 (April 1998).
94. G. Liu, S.G. Eskin, and A.G. Mikos, "Effects of Growth Factors on the Migration and Proliferation of Vascular Adventitial Fibroblasts," *FASEB J.*, 12, Abstract 605 (April 1998).
95. L. Lu, R. Kapur, C.A. Garcia, and A.G. Mikos, "Morphological Study of a Human RPE Cell Line Cultured on Patterned Biodegradable Polymer Substrates," *Invest. Ophthalm. & Visual Sci.*, 39, Abstract 463-B386 (March 1998).
96. L. Lu, C.A. Garcia, and A.G. Mikos, "Tissue Engineering of Retinal Pigment Epithelium Using Thin Poly(DL-Lactic-co-Glycolic Acid) Films," *Annals Biomed. Eng.*, 26, Abstract TE.37 (October 1998).
97. S.J. Peter, C.R. Liang, D.J. Kim, M.S. Widmer, and A.G. Mikos, "Engineering the Osteoblastic Phenotype of Marrow-Derived Cells Using Cell Culture Supplements," *Annals Biomed. Eng.*, 26, Abstract TE.52 (October 1998).
98. J.E. Babensee, L.V. McIntire, A.G. Mikos, and C.W. Smith, "Leukocyte Response to Biomaterial Implantation - Role of Complement Using Mouse Models," *Abstr. AIChE Meeting*, Abstract 198f (November 1998).
99. L. Lu, C.A. Garcia, and A.G. Mikos, "In Vitro Degradation of Thin Poly(DL-Lactic-co-Glycolic Acid) Films," *Abstr. AIChE Meeting*, Abstract 199e (November 1998).
100. L. Lu, R. Bizios, C.A. Garcia, A.G. Mikos, and L.C. Kam, "Human Retinal Pigment Epithelium Cell Culture on Patterned Surfaces," *Abstr. AIChE Meeting*, Abstract 269c (November 1998).
101. A.S. Goldstein, V. Liu, and A.G. Mikos, "Enhanced Growth of Osteoblastic Cells in Porous Scaffolds by Forced Convection," *Abstr. AIChE Meeting*, Abstract 269h (November 1998).
102. G. Liu, S.G. Eskin, and A.G. Mikos, "Basic FGF Directed Migration of Vascular Adventitial Fibroblasts Via Integrin Regulation," *Abstr. AIChE Meeting*, Abstract 276e (November 1998).